NARRATIVE:

PROJECT DESCRIPTION

THE PURPOSE OF THE PROJECT IS FOR DOMINION ENERGY TO REBUILD TRANSMISSION LINE 550 (TL 550). IN ORDER TO MAINTAIN THE STRUCTURAL INTEGRITY AND RELIABILITY OF ITS TRANSMISSION SYSTEM IN COMPLIANCE WITH MANDATORY NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION ("NERC") RELIABILITY STANDARDS, THE COMPANY PROPOSES TO REBUILD, ENTIRELY WITHIN AN EXISTING ROW, 500 KV LINE #550 (MT. STORM TO VALLEY). THE LINE IS APPROXIMATELY 64.5 MILES LONG. OF WHICH 33.6 MILES ARE LOCATED IN GRANT. HARDY, AND PENDLETON COUNTIES IN WEST VIRGINIA AND 30.9 MILES ARE LOCATED IN AUGUSTA AND ROCKINGHAM COUNITES IN VIRGINIA. THE TRANSMISSION LINE RUNS FROM THE EXISTING MT. STORM SUBSTATION IN GRANT COUNTY, WEST VIRGINIA TO THE EXISTING VALLEY SUBSTATION IN AUGUSTA COUNTY,

THE PROPOSED PROJECT WILL DEMOLISH AND REBUILD THE AGING TRANSMISSION LINE INFRASTRUCTURE THAT IS AT THE END OF ITS SERVICE LIFE IN ORDER TO COMPLY WITH MANDATORY NERC STANDARDS. THE PROPOSED PROJECT WILL ENABLE MAINTENANCE OF THE OVERALL LONG-TERM RELIABILITY OF THE TRANSMISSION SYSTEM AND THE GENERATING CAPABILITIES OF THE SYSTEM. EXISTING STRUCTURES WERE CONSTRUCTED BEFORE 1966 ON SINGLE CIRCUIT COR-TEN® TOWERS. THESE COR-TEN® TOWERS HAVE BEEN IDENTIFIED FOR REBUILD BASED ON AN ASSESSMENT IN ACCORDANCE WITH MANDATORY NERC STANDARDS.

BECAUSE THE EXISTING ROW IS ADEQUATE TO CONSTRUCT THE PROPOSED PROJECT, NO NEW ROW IS NECESSARY. GIVEN THE AVAILABILITY OF EXISTING ROW AND THE STATUTORY PREFERENCE GIVEN TO THE USE OF EXISTING ROW, AND BECAUSE ADDITIONAL COSTS AND ENVIRONMENTAL IMPACTS WOULD BE ASSOCIATED WITH THE ACQUISITION AND CONSTRUCTION OF NEW ROW, NO ALTERNATE ROUTES REQUIRING NEW ROW FOR THIS PROJECT WERE CONSIDERED.

TOTAL PROJECT AREA: XX.XX ACRES

TOTAL DISTURBED ACRES: XX.CC ACRES

THE EXISTING SITE CONDITIONS VARY THROUGHOUT THE LENGTH OF THE TRANSMISSION LINE.

THE ADJACENT AREAS VARY THROUGHOUT THE LENGTH OF THE TRANSMISSION LINE.

STREAMS WILL BE PROTECTED BY BELTED SILT RETENTION FENCE (BSRF) AND ROLLED EROSION CONTROL PRODUCT (RECP). CRITICAL SLOPES WILL BE PROTECTED BY BSRF, TURF REINFORCEMENT MAT (TRM), RECP, TRENCH PLUGS WITH BLEEDER DRAINS, AND SLOPE BREAKERS. CRITICAL SLOPES INCLUDE AREAS THAT WOULD BE PRONE TO SLIPS OR SLOUGHING. SPECIAL ATTENTION SHOULD BE GIVEN TO THOSE SLOPES THAT ARE NEAR SURFACE WATERS. THE DISCHARGE OF SOILS FROM FAILED SLOPES INTO SURFACE WATERS IS A SERIOUS OCCURRENCE AND MAY RESULT IN ENVIRONMENTAL NON-COMPLIANCE.

F APPLICABLE, OUTLET MARKERS WILL BE POSTED DURING THE TERMS OF THE PERMIT COVERAGE AT THE STREAM BANK AT EACH OUTLET AND COVERED. THE MARKER WILL CONSIST OF THE NAME FOR THE PROJECT WHICH THE PERMIT WAS ISSUED, THE PERMIT NUMBER, AND OUTLET NUMBER. THE MARKER SHALL BE A MINIMUM OF TWO FEET BY TWO FEET AND SHALL BE A MINIMUM OF THREE FEET ABOVE THE GROUND.

Soils within Project Limits (TL 550)

ByB - Buchanan variant rubbly loam Lm - Lickdale stony loam Me - Melvin silt loam

Soils with Hydric Inclusions

BkD - Berks channery silt loam BkE - Berks channery silt loam

BkF - Berks channery silt loam BrD - Berks-Weikert channery silt loams BrF - Berks-Weikert channery silt loams

CeB - Cavode stony silt loam CwB - Clymer and Wharton rubbly soils

Pb - Potomac fine sandy loam Us - Udorthents, Sandstone, and Mudstone

MhC - Monongahela silt loam

Non-Hydric Soils

BkC - Berks channery silt loam

BvC - Buchanan stony loam CwD - Clymer and Wharton rubbly soils

ErC - Ernest silt loam LdC - Leetonia rubbly loamy sand

WoC - Wharton stony silt loam MhB - Monongahela silt loam

BcE - Belmont-Calvin stony silt loams BrC - Berks-Weikert channery silt loams CsB - Clymer stony loam DIC - Dekalb, Hazleton, and Lehew stony soils DIE - Dekalb, Hazleton, and Lehew stony soils DIF - Dekalb, Hazleton, and Lehew stony soils

DsC - Dekalb, Hazleton, and Lehew very stony soils DsE - Dekalb, Hazleton, and Lehew very stony soils DsF - Dekalb, Hazleton, and Lehew very stony soils EvC - Ernest variant stony loam GIC - Gilpin silt loam

> GmC - Gilpin stony silt loam GmE - Gilpin stony silt loam GmF - Gilpin stony silt loam Rk - Rock outcrop and Rubble land SsD - Shouns very stony silt loam

> > Ud - Udorthents, smoothed

WoD - Wharton stony silt loam

W - Water

POTENTIAL EROSION PROBLEM AREAS:

POTENTIAL EROSION PROBLEM AREAS WILL BE PROTECTED BY BSRF, TRM, RECP, AND SLOPE BREAKERS. POTENTIAL EROSION PROBLEM AREAS INCLUDE AREAS THAT WOULD BE PRONE TO SEVERE EROSION, SLIPS, OR SLOUGHING, SPECIAL ATTENTION SHOULD BE GIVEN TO THOSE SLOPES THAT ARE NEAR SURFACE WATERS. THE DISCHARGE OF SOILS FROM FAILED SLOPES INTO SURFACE WATERS IS A SERIOUS OCCURRENCE AND MAY RESULT IN ENVIRONMENTAL NON-COMPLIANCE.

EROSION AND SEDIMENT CONTROLS:

EACH CONSTRUCTION OPERATION COVERED BY THIS PERMIT SHALL DEVELOP A DESCRIPTION OF CONTROLS APPROPRIATE FOR THE PROJECT AND IMPLEMENT SUCH CONTROLS. THE DESCRIPTION OF THESE CONTROLS SHALL ADDRESS THE FOLLOWING MINIMUM COMPONENTS, INCLUDING A SCHEDULE FOR IMPLEMENTING SUCH CONTROLS.

THE FOLLOWING CONTROLS WILL BE EMPLOYED ONSITE (AS DESIGNATED WITH A "YES" BELOW), AS SHOWN IN THE E&SCP.

WV E&S Manual	Description	Used on site Yes/No
3.01-1	Preserving Existing Vegetation	Yes
3.02-1	Stabilized Construction Entrance	Yes
3.03-1	Temporary Construction Road, Work and Parking Area Stabilization	Yes
3.04-1	Safety Fence	No
3.05-1	Rock Check Dams	No
3.06-1	Wattles	Yes
3.07-1	Commercial Silt Dikes	No
3.08-1	Surface Roughening	No
3.09-1	Topsoiling	Yes
3.10-1	Temporary Seeding	Yes
3.11-1	Permanent Seeding	Yes
3.12-1	Mulching including Flexible Growth Medium and Bonded Fiber Matrix	Yes
3.13-1	Rolled Erosion Control Products	Yes
3.14-1	Sodding	No
3.15-1	Temporary Diversions	Yes
3.16-1	Pipe Slope Drain	No
3.17-1	Outlet Protection	Yes
3.18-1	Right of Way Diversion	Yes
3.19-1	Level Lip Spreader	Yes
3.20-1	Surface Water Control	No
3.21-1	Instream BMPs	No
3.22-1	Dewatering	No
3.23-1	Riprap	Yes
3.24-1	Geotextiles	Yes
3.25-1	Vegetative Buffer Strip	No
3.27-1	Silt Fence	Yes
3.28-1	Super Silt Fence	Yes
3.29-1	Sediment Trap	No
3.30-1	Sediment Basin	No
3.33-1	Inlet Protection	No
3.35-1	Access/Low Volume Road/Driveways	Yes

VEGETATIVE PRACTICES (WV GENERAL PERMIT PART II.H.3.b AND PART III.)

SITE PLANS SHOULD ENSURE THAT EXISTING VEGETATION IS PRESERVED WHERE ATTAINABLE AND THAT DISTURBED PORTIONS OF THE SITE ARE STABILIZED AS RAPIDLY AS POSSIBLE. STABILIZATION PRACTICES MAY INCLUDE: TEMPORARY SEEDING, PERMANENT SEEDING, MULCHING, GEOTEXTILES, SOD STABILIZATION, VEGETATIVE BUFFER STRIPS, PROTECTION OF TREES, PRESERVATION OF MATURE VEGETATION, AND OTHER APPROPRIATE MEASURES. ALSO INCLUDE IN THE PLAN SEEDBED PREPARATION REQUIREMENTS AND THE TYPE AND AMOUNT OF SOIL AMENDMENTS NECESSARY TO ESTABLISH A HEALTHY STAND OF VEGETATION. A RECORD OF THE DATES WHEN MAJOR GRADING ACTIVITIES WILL OCCUR. AND WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE. AND WHEN STABILIZATION MEASURES WILL BE INITIATED SHALL BE INCLUDED IN THE PLAN. EXCEPT AS NOTED BELOW. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN SEVEN DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS PERMANENTLY CEASED.

STABILIZATION (WV GENERAL PERMIT PART III.A.3)

WHERE THE INITIATION OF STABILIZATION MEASURES BY THE SEVENTH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASES IS PRECLUDED BY SNOW COVER, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS CONDITIONS ALLOW. STABILIZATION (WV GENERAL PERMIT PART III.A.3)

WHERE CONSTRUCTION ACTIVITY WILL RESUME ON A PORTION OF THE SITE WITHIN 14 DAYS FROM WHEN ACTIVITIES CEASED. (E.G., THE TOTAL TIME PERIOD THAT CONSTRUCTION ACTIVITY IS TEMPORARILY HALTED IS LESS THAN 14 DAYS) THEN STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE BY THE SEVENTH DAY AFTER CONSTRUCTION ACTIVITIES HAVE TEMPORARILY

SEEDING (WV GENERAL PERMIT PART III.A.3)

AREAS WHERE THE SEED HAS FAILED TO GERMINATE ADEQUATELY (UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70%) WITHIN 30 DAYS AFTER SEEDING AND MULCHING MUST BE RESEEDED IMMEDIATELY, OR AS SOON AS WEATHER CONDITIONS ALLOW. DIVERSIONS (WV GENERAL PERMIT PART II.H.3.B.9)

DIVERSIONS MUST BE STABILIZED PRIOR TO BECOMING FUNCTIONAL.

STRUCTURAL PRACTICES (WV GENERAL PERMIT PART II.H.3.b AND PART IV.A.)

THIS SECTION OUTLINES A DESCRIPTION OF THE STRUCTURAL PRACTICES TO BE USED TO DIVERT FLOWS AROUND EXPOSED SOILS, STORE FLOWS OR OTHERWISE LIMIT RUNOFF FROM EXPOSED AREAS AND ELIMINATE SEDIMENT-LADEN RUNOFF FROM THE SITE. SUCH PRACTICES MAY INCLUDE BUT ARE NOT LIMITED TO SILT SOCK, SILT FENCE, EARTH DIKES AND BERMS, LAND GRADING, DIVERSIONS, DRAINAGE SWALES, CHECK-DAMS SUBSURFACE DRAINS, ROCK OUTLET PROTECTION, REINFORCED SOIL RETENTION SYSTEMS AND GEOTEXTILES, GABIONS AND RIPRAP.

ONLY THE STRUCTURAL PRACTICES LISTED ABOVE IN THE TABLE WILL BE USED ONSITE. DESCRIPTIONS OF THESE PRACTICES ARE LOCATED IN E\$SCP / SWPPP HANDBOOK.

DIVERSIONS (WV GENERAL PERMIT PART II.H.3.B.9.)

IF NECESSARY, DIVERSIONS WILL BE USED TO DIRECT RUNOFF TO THE TRAPPING STRUCTURE. DIVERSIONS MUST BE STABILIZED PRIOR TO BECOMING FUNCTIONAL.

FILL SLOPES (WV GENERAL PERMIT PART II.H.3.B.9.)

FILL SLOPES MUST BE PROTECTED BY MEASURES USED TO DIVERT RUNOFF AWAY FROM FILL SLOPES TO CONVEYANCE MEASURES SUCH AS PIPE SLOPE DRAINS OR STABLE CHANNELS.

SEDIMENT DISCHARGE (WV GENERAL PERMIT PART IV.A.)

ALL TRAPPED SEDIMENTS WILL BE DISPOSED ON AN UPLAND AREA WHERE THERE IS NO CHANCE OF ENTERING NEARBY STREAMS.

DEWATERING (WV GENERAL PERMIT PART IV.A)

BREACHING THE EMBANKMENT TO DEWATER THE STRUCTURE IS NOT PERMITTED. DEWATERING AND STRUCTURE REMOVAL SHALL NOT CAUSE A VIOLATION OF WATER QUALITY STANDARDS. PROVIDE A DESCRIPTION OF THE PROCEDURES THAT WILL BE USED IN REMOVING THESE STRUCTURES AND THE TIME FRAME.

SEDIMENT-LADEN WATER (WV GENERAL PERMIT PART IV.A)

NO SEDIMENT-LADEN WATER WILL BE ALLOWED TO LEAVE THE SITE WITHOUT GOING THROUGH AN APPROPRIATE BEST MANAGEMENT PRACTICE.

PROPOSED TEMPORARY AND EXISTING ACCESS ROADS WILL BE USED FOR CONSTRUCTION AND WILL BE CONSTRUCTED AT A WIDTH OF 14 FEET AND I FOOT SHOULDERS. THE ACCESS ROADS ARE TO BE CONSTRUCTED BASED ON THIS PLAN AND THE GEORGE WASHINGTON NATIONAL FOREST AND THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION REGULATIONS.

PROPOSED TEMPORARY ACCESS ROADS:

PROPOSED TEMPORARY ACCESS ROADS ARE TEMPORARY ROADS THAT WILL USE GRAVEL UNLESS THE ROAD IS GOING TO AFFECT AGRICULTURAL OR ENVIRONMENTAL FEATURES THEN TIMBER MATS WILL BE USED. THESE TEMPORARY ACCESS ROADS GENERALLY WILL NOT REQUIRE ANY CUT PRIOR TO APPLICATION OF GRAVEL. DEPENDING ON SOIL TYPE AND VARIOUS SITE CONDITIONS A MAXIMUM 4-INCH CUT MAY BE REQUIRED PRIOR TO INSTALLATION. FILTER FABRICS ARE NOT USED IN THE CONSTITUTION OF TEMPORARY ACCESS ROADS AS THESE ROADS WILL BE REMOVED AND THE AREA WILL BE RESTORED TO PRE-EXISTING CONDITIONS AT THE END OF THE PROJECT.

EXISTING ACCESS ROADS:

EXISTING ACCESS ROADS ARE PERMANENT ROADS THAT HAVE PREEXISTING GRAVEL OR ARE COMPACTED THAT MEET THE CHARACTERISTIC OF AN EXISTING ROAD. THESE ROADS ARE TO BE IMPROVED WHERE NECESSARY AND WILL ADHERE TO THIS PLAN DESIGN AND THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION REGULATIONS. WITH THE IMPROVEMENTS AND THE USE OF THESE EXISTING ROADS THE STORMWATER RUNOFF AND LAND CHARACTERISTIC WILL NOT CHANGE.

TEMPORARY MATTING:

DOMINION ENERGY FREQUENTLY UTILIZES CONSTRUCTION MATS FOR ACCESS THROUGH SENSITIVE AREAS, JURISDICTIONAL WETLANDS AND WATERS, AGRICULTURAL FIELDS AND OTHER AREAS AS DETERMINED BY THE DOMINION ENERGY CONSTRUCTION COORDINATOR/CONTRACTOR. THIS PRACTICE REDUCES SOIL COMPACTION AND PROVIDES A TRAVEL WAY FOR SITE-WORK CONTRACTORS ALONG THE UTILITY ROW, THUS MINIMIZING LAND DISTURBANCE. WHEN UTILIZING CONSTRUCTION MATS FOR CROSSING WATERWAYS, DOMINION ENERGY WILL ENSURE THE CONSTRUCTION MATS ARE ANCHORED WHERE THE POSSIBILITY EXISTS THAT THE WATERWAY ELEVATION MAY DRAMATICALLY CHANGE; THE ANCHORING SHOULD REDUCE OR ELIMINATE THE POTENTIAL FOR CONSTRUCTION MATS TO WASH DOWNSTREAM. WHERE ANCHORING DOES NOT PREVENT CONSTRUCTION MATS FROM WASHING DOWNSTREAM, THE CONSTRUCTION MATS WILL BE RETRIEVED AS SOON AS PRACTICABLE AND ANY DAMAGES RESULTING FROM THE WAYWARD CONSTRUCTION MATS WILL BE

RESTORATION OF ACCESSES:

WHERE DOMINION ENERGY REHABILITATES AND RESTORES CONSTRUCTION ACCESSES AND CONSTRUCTION ACCESSES. THE FOLLOWING GENERAL SEQUENCE OF ACTIVITIES WILL BE FOLLOWED. PROJECT SPECIFIC APPROACHES MAY BE UTILIZED AS DICTATED BY SITE

- I. ALL FINE AGGREGATE, CRUSHER RUN MATERIALS AND OTHER FINES WHICH MAY CLOG THE SURFACE OF THE POROUS BALLAST/BASE STONE SHALL BE REMOVED FROM THE TEMPORARY ACCESS AREAS. GEOTECHNICAL FABRIC, IF USED, SHALL
- 2. ANY DEFINED DITCHES OR TOPOGRAPHIC ALTERATIONS WHICH SIGNIFICANTLY ALTER PRE- DEVELOPMENT RUNOFF CHARACTERISTICS SHALL BE GRADED AND TOPSOILED TO MATCH PRE-DEVELOPMENT DRAINAGE PATTERNS AND AVOID CONCENTRATION OF RUNOFF.
- 3. POROUS BALLAST STONE WILL BE REMOVED FROM TEMPORARY ACCESSES TO THE MAXIMUM EXTENT PRACTICABLE.
- 4. PERMANENT ACCESSES INSTALLED BY DOMINION ENERGY WILL REMAIN IN PLACE.
- 5. PREVIOUSLY EXISTING PRIVATE STONED ROADS WILL BE LEFT IN PLACE AND DOCUMENTED IN THE ESC PLANS.
- 6. TOP-SOILED REHABILITATED ACCESSES AND TEMPORARY CONSTRUCTION ENTRANCES MUST BE STABILIZED WITH A FIRM STAND OF EROSION RESISTANT GRASSES.
- 7. REHABILITATED ACCESSES AND TEMPORARY CONSTRUCTION ENTRANCES SHALL BE LEFT IN A NATURAL VEGETATED STATE AND SHALL BE MOWED NO MORE THAN FOUR (4) TIMES PER YEAR.

MINOR ACCESS ROADS VS MAJOR ACCESS ROADS:

MINOR ACCESS ROADS

MINOR ACCESS ROADS ARE EXISTING ACCESS ROADS THAT NEED MINOR IMPROVEMENTS (TOP DRESSING) OR THEY ARE PROPOSED TEMPORARY ACCESS ROADS THAT WILL BE RESTORED TO THE PRE-EXISTING CONDITIONS.

MAJOR ACCESS ROADS

MAJOR ACCESS ROADS ARE EXISTING OR PROPOSED ACCESS ROADS THAT NEED MAJOR IMPROVEMENTS WHICH INCLUDES WIDENING AND REDESIGN/DESIGN. THE MAJOR IMPROVEMENTS ON THESE ROADS ARE TO PROVIDE A SAFE AND ADEQUATE ACCESS ROAD FOR THE EQUIPMENT TO BE USED. MAJOR ACCESS ROADS MUST BE GRAVELED AND SHOULD BE ANGLED TO THE BANK, SILT SOCKS (SILT FENCING), WATER BARS, AND CULVERTS WILL BE USED WHEN NECESSARY AND WILL BE INSTALLED ON EXISTING CONTOURS AND ALWAYS PERPENDICULAR TO THE DIRECTION OF FLOW WHERE NECESSARY ALONG THE ACCESS ROADS. THE MAJOR ACCESS ROAD DESIGN IS TO ADHERE TO THIS PLAN AND THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION REGULATIONS.

WASTE/EXCESS MATERIAL:

WASTE MATERIAL WILL BE DISPOSED OF IN WASTE AREAS (PROPOSED STOCKPILE/STORAGE AREA) THAT ARE INCLUDED WITHIN THE LOD. IF THERE IS A NEED FOR ADDITIONAL WASTE ARES THE EXCESS MATERIAL WILL BE TAKEN OFFSITE AND THAT LOCATION WILL EITHER GET ITS OWN REGISTRATION UNDER THE GENERAL PERMIT OR THIS REGISTRATION WILL BE MODIFIED TO INCLUDE THOSE ADDITIONAL OFFSITE AREAS. TREE WASTE GENERALLY WILL BE KEPT ON SITE BUT IF TAKEN OFFSITE IT WILL BE DONE SO IN A LEGAL MANNER.

CONSTRUCTION PHASING:

PHASE I SEQUENCE

- GENERAL CONSTRUCTION SEQUENCE WILL MOVE FROM STRUCTURE 129 TO STRUCTURE 137.
- INSTALL TEMPORARY CONSTRUCTION ENTRANCE (CE) AND ACCESS TO CONSTRUCTION AREAS.
- EXECUTE PROPOSED CLEARING ACTIVITIES, IF NECESSARY.
- COMMENCE ROAD IMPROVEMENT ACTIVITIES.

• INSTALL FOUNDATIONS WORK FOR NEW STRUCTURES.

- CONTROL PRODUCTS, AND LEVEL LIP SPREADER) AS SHOWN ON E&SCP SHEETS. • INSTALL ALL TIMBER MATS IN CRITICAL OR SENSITIVE AREAS.
- INSTALL TEMPORARY WETLAND AND STREAM CROSSINGS IN PERMITTED LOCATIONS.

• FORMAL STRUCTURE CONSTRUCTION ACTIVITIES BEGIN WITH REMOVAL OF EXISTING STRUCTURES AND CONDUCTOR WIRES, AND THE INSTALLATION OF NEW STRUCTURES AND CONDUCTOR WIRES.

• INSTALL TEMPORARY PERIMETER CONTROLS (I.E. STABILIZED CONSTRUCTION ENTRANCES, SILT FENCE (SF), SUPER SILT FENCE (SSF),

WATTLES/SILT SOCKS (SS), RIGHT OF WAY DIVERSION (RWD), TEMPORARY DIVERSION, RIPRAP, OUTLET PROTECTION, ROLLED EROSION

- ONCE STRUCTURE CONSTRUCTION IS COMPLETE, REHABILITATION EFFORTS WILL BEGIN.
- ONCE STABILIZED, REMOVAL OF ALL NECESSARY EROSION AND SEDIMENT CONTROLS WILL OCCUR.
- RESTORE ALL TEMPORARILY IMPACTED AREAS TO THEIR PRE-EXISTING CONDITIONS.

CONSTRUCTION SCHEDULE

PHASE 3 WEST VIRGINIA (OVERALL TIMELINE: XX-XX)

- CONSTRUCTION WILL BEGIN IN XX WITH THE INSTALLATION OF CONSTRUCTION ENTRANCE AND ROAD IMPROVEMENTS TO EACH
- STRUCTURE AND E&SC INSTALLATION.
- FROM XX TO XX, NEW STRUCTURE FOUNDATIONS WILL BE INSTALLED.

PHASE I CONSTRUCTION ACTIVITIES WILL BE COMPLETED XX.

- FOLLOWING INSTALLATION OF NEW STRUCTURE FOUNDATIONS, WORK WILL CONTINUE WITH THE DEMOLITION OF EXISTING
- STRUCTURES AND INSTALLATION OF NEW STRUCTURES AND CONDUCTOR WIRE.
- PHASE II CONSTRUCTION ACTIVITIES WILL BE COMPLETED BY XX.

A PRECONSTRUCTION MEETING WILL BE HELD ON SITE AND MAY INCLUDE DOMINION ENERGY'S CONSTRUCTION COORDINATOR. THE PROJECT ENGINEER. THE EROSION AND SEDIMENT CONTROL INSPECTOR, AND THE CONTRACTOR PRIOR TO INITIATING CONSTRUCTION. THE DESIGNATED RESPONSIBLE LAND-DISTURBER IS REQUIRED TO ATTEND THE PRECONSTRUCTION MEETING FOR THE PROJECT.

SITE INFORMATION ON WHEN MAJOR GRADING ACTIVITIES OCCUR AND WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE WILL BE PROVIDED ON THE INSPECTION REPORTS FOR THE PROJECT PROVIDED IN APPENDIX E OF THE SWPPP AND NOTED IN THE LAND DISTURBANCE LOG IN APPENDIX F OF THE SWPPP. COMPLETED INSPECTION REPORTS SUMMARIZING EACH INSPECTION SHALL BE RETAINED IN APPENDIX E OF THE SWPPP OR IN A SEPARATE INSPECTION NOTEBOOK KEPT ONSITE.

FROM WYDEP PRIOR TO COMMENCEMENT OF LAND DISTURBING ACTIVITIES. ONCE RECEIVED, ALL APPROVALS WILL BE INCLUDED IN APPENDIX D OF THE SWPPP. THE SCHEDULE OF ACTIVITIES IDENTIFIED IN THE EASCP WILL BE GENERALLY FOLLOWED: HOWEVER, THE TIMING AND DEVELOPMENT OF EACH

STAGE IS DEPENDENT ON WEATHER CONDITIONS, SITE CONDITIONS, WORK AREA DESIGN, AND THE INSTALLATION RATE.

A PERMIT APPLICATION SHALL BE PREPARED AND SUBMITTED VIA THE ONLINE REGISTRATION APPLICATION FORM AND APPROVAL RECEIVED

PLEASE REFER TO THE CALCULATIONS SHEETS FOR EACH MAJOR ROAD



MA

PROJECT STATUS DESCRIPTION

OB NUMBER 5641.48 DESIGN PLAN

DOMINION SITE PREPARATION PERFORMANCE SPECIFICATIONS

IT IS THE INTENT OF THESE SPECIFICATIONS TO HAVE A COMPLETELY PREPARED SITE FOR THE CONSTRUCTION OF AN ELECTRICAL FACILITY AT THE COMPLETION OF THE "WORK" AS INDICATED ON THE DRAWINGS, SPECIFICATIONS, OR OTHER DOCUMENTS PROVIDED.

THE REGULATIONS OF ALL LOCAL, STATE, OR FEDERAL GOVERNMENTAL BODIES HAVING JURISDICTION OVER THE WORKING AREAS SHALL BE OBSERVED AT ALL TIMES.

ANY SPECIFICATIONS OR INSTRUCTIONS APPEARING ON THE DRAWINGS SHALL HAVE PRECEDENCE OVER THE WRITTEN SPECIFICATIONS WHICH APPEAR HEREIN. IN THE EVENT THAT A DISCREPANCY OR OMISSION HAS OCCURRED, DOMINION SHALL BE CONSULTED FOR RESOLUTIONS.

ALL "WORK" SHALL BE PERFORMED IN A MANNER CONSISTENT WITH THE BEST PRACTICES OF THE TRADES INVOLVED.

ALL "WORK" SHALL BE PERFORMED WITHIN THE LIMITS OF THE PROPERTY / RIGHTS-OF-WAY SHOWN ON THE DRAWINGS. THE CONTRACTO

ALL "WORK" SHALL BE PERFORMED WITHIN THE LIMITS OF THE PROPERTY / RIGHTS-OF-WAY SHOWN ON THE DRAWINGS. THE CONTRACTOR WILL RECOGNIZE AND ABIDE BY ALL TERMS AND CONDITIONS OF PERMITS, EASEMENTS, AND AGREEMENTS RELATING TO THE PROJECT.

CLEARING AND GRUBBING

LIMITS FOR CLEARING AND/OR GRUBBING SHALL BE AS DEFINED ON THE DRAWINGS.

CLEARING SHALL CONSIST OF REMOVAL AND DISPOSAL OF BRUSH, DOWNED TIMBER, LOGS, STANDING TREES AND SNAGS, OTHER GROWTH AND ANY ITEMS THAT WOULD INTERFERE WITH CONSTRUCTION OPERATIONS.

GRUBBING SHALL CONSIST OF REMOVAL AND DISPOSAL OF STUMPS, BURIED LOGS, ROOTS GREATER THAN 1/2" DIAMETER, AND ANY OTHER ORGANIC MATERIAL BELOW THE GROUND SURFACE. ALL CLEARED AREAS WILL BE GRUBBED UNLESS OTHERWISE NOTED.

DISPOSAL OF CLEARED/GRUBBED MATERIAL BY BURNING SHALL ONLY BE USED WHEN WRITTEN APPROVAL IS OBTAINED FROM LOCAL AUTHORITIES AND DOMINION. OTHERWISE, DISPOSAL SHALL BE OUTSIDE THE LIMITS OF DOMINION CONTROLLED LAND.

TOPSOIL

ALL TOPSOIL AND SURFACE SOILS CONTAINING ORGANIC MATERIAL SHALL BE REMOVED FROM THE GRUBBED AREA. TOPSOIL SHALL BE STOCKPILED FOR FUTURE USE IN APPROVED LOCATIONS UNLESS OTHERWISE SHOWN ON THE DRAWINGS.

TOPSOIL SHALL NOT BE USED AS, OR MIXED WITH, FILL MATERIAL IN THE CONSTRUCTION OF EARTH EMBANKMENTS UNLESS OTHERWISE SHOWN ON THE DRAWINGS.

TOPSOIL MATERIAL USED AS A SURFACE DRESSING SHALL BE REASONABLY FREE OF CINDERS, DEBRIS, AND STONES. UNSUITABLE AND EXCESS TOPSOIL MATERIAL SHALL BE DISPOSED OFFSITE.

<u>EARTHWORK</u>

EXCAVATION:

EXCAVATION SHALL BE ACCOMPLISHED BY CUTTING ACCURATELY TO THE CROSS SECTIONS, GRADES, AND ELEVATIONS SHOWN ON THE DRAWINGS.

SOFT, UNSTABLE, OR OTHERWISE UNSATISFACTORY MATERIALS ENCOUNTERED AT THE REQUIRED GRADES SHALL BE REMOVED AS DIRECTED AND REPLACED WITH APPROVED, PROPERLY COMPACTED MATERIAL.

COMMON EXCAVATION SHALL INCLUDE ALL MATERIAL WHICH CAN BE REMOVED BY COMMON EARTH EXCAVATION EQUIPMENT, OTHER THAN SOLID ROCK OR BOULDERS AND DETACHED PIECES OF ROCK, EACH EXCEEDING 2 CUBIC YARDS IN VOLUME.

ROCK EXCAVATION SHALL BE MATERIAL WHICH REQUIRES THE USE OF PNEUMATIC HAMMERS AND/OR EXPLOSIVES FOR REMOVAL.

IF EARTHWORK OPERATIONS ARE PERFORMED DURING WET SEASONS, CONTRACTOR SHALL AVOID OPERATING EQUIPMENT ON SATURATED SOILS. ANY WET SUBGRADE AREAS WHICH RECEIVE COMPACTED FILL SHALL BE DRAINED AND ALLOWED TO DRY.

THE EXPOSED SUBGRADES OF THE CRANE PAD AND ROADBEDS SHALL BE PROOFROLLED TO DETECT UNSUITABLE SOIL CONDITIONS.
PROOFROLLING SHALL BE DONE AFTER A SUITABLE PERIOD OF DRY WEATHER TO AVOID DEGRADING THE SUBGRADE. PROOFROLLING SHALL BE PERFORMED WITH A HEAVILY LOADED DUMP TRUCK OR WITH SIMILAR APPROVED CONSTRUCTION EQUIPMENT. SOFT MATERIALS ENCOUNTERED SHALL BE COMPLETELY EXCAVATED AND REPLACED WITH APPROVED FILL MATERIALS.

BENCHING:

SITE PREPARATION:

BENCHING SHALL CONSIST OF A SERIES OF HORIZONTAL CUTS BEGINNING AT THE TOE OF THE EXISTING SLOPED SURFACE AND CONTINUING AT EACH VERTICAL INTERSECTION OF THE PREVIOUS CUT. SATISFACTORY MATERIAL REMOVED DURING THIS OPERATION SHALL BE RE-COMPACTED ALONG WITH THE NEW EMBANKMENT MATERIAL AS GENERALLY SPECIFIED, EXCEPT MOISTURE CONTENT SHALL BE MAINTAINED WITHIN 10 PERCENT OF THE OPTIMUM.

BENCHING SHALL BE REQUIRED FOR ALL FILL EMBANKMENTS PLACED ON EXISTING SLOPES AS FOLLOWS:

SLOPES STEEPER THAN 4:1 BUT NOT STEEPER THAN 1 1/2:1, THE BENCH SHALL BE AT LEAST 6 FT. IN WIDTH.

EMBANKMENT:

EMBANKMENT WORK SHALL CONSIST OF THE PLACEMENT AND COMPACTION OF FILL MATERIAL ABOVE THE NATURAL GROUND OR OTHER SURFACE IN CONFORMANCE WITH THE DRAWINGS.

MATERIALS:

APPROVED SOILS USED IN COMPACTED FILLS SHALL BE FREE OF DEBRIS AND FIBROUS ORGANIC MATERIAL. FROZEN MATERIAL WILL NOT BE PERMITTED IN THE FILL. SATISFACTORY MATERIALS SHALL COMPRISE THOSE CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL SYSTEM, ASTM D-2487 AS: GW, GP, SW, SP, SM, AND SC. THESE MATERIALS SHALL POSSESS A MAXIMUM DRY DENSITY OF 100 #/CU.FT. OR GREATER REFERENCED TO ASTM D-698 STANDARD PROCTOR. SOILS SHALL HAVE A LIQUID LIMIT LESS THAN 40 PERCENT AND A PLASTICITY INDEX LESS THAN 15.

OTHER MATERIALS, WHEN APPROVED BY ENGINEERING, MAY BE PERMITTED IN FILL AREAS.

UNSATISFACTORY SOILS INCLUDE THOSE CLASSIFIED AS: PT, OH OR OL, CH, MH, CL, AND ML, AS REFERENCED TO ASTM D-2487.

THESE MATERIAL SPECIFICATIONS ARE DOMINION STANDARDS. SATISFACTORY AND UNSATISFACTORY MATERIAL USE SHOULD BE VERIFIED AGAINST SITE-SPECIFIC GEOTECHNICAL ENGINEERING REPORT AND RECOMMENDATIONS. REFER TO THE GEOTECHNICAL REPORT AND ITS ADDENDUMS FOR FINAL DETERMINATIONS.

COMPACTION:

COMPACTION EQUIPMENT SHALL CONSIST OF VIBRATORY OR TAMPING ROLLERS, SHEEPSFOOT ROLLER, PNEUMATIC-TIRED ROLLERS, THREE-WHEEL POWER ROLLERS, WALK BEHIND VIBRATORY ROLLERS, VIBRATORY PLATE OR OTHER APPROVED EQUIPMENT WELL SUITED TO THE SOIL BEING COMPACTED.

APPROVED FILL MATERIAL SHALL BE PLACED IN UNIFORM HORIZONTAL LIFTS OF APPROXIMATELY 8" DEPTH (LOOSE MEASUREMENT), EXCEPT FOR ROAD MATERIALS ABOVE SUBGRADE ELEVATION AND THE UPPER 12" OF BUILDING PADS WHICH REQUIRE 6" LIFTS. WHERE WALK BEHIND ROLLERS AND VIBRATORY PLATE COMPACTORS ARE USED, THE LIFT THICKNESS SHALL NOT EXCEED 4".

GENERALLY, FILLS SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D-698), WITH MOISTURE CONTENT RANGING BETWEEN LESS THAN 3 PERCENT UP TO THE OPTIMUM AS DETERMINED BY THE PROCTOR DENSITY TEST. THE UPPER 12" OF ROADBEDS AND CRANE/BUILDING PADS REQUIRE 98 PERCENT COMPACTION REFERENCED TO ASTM D-698, WITH MOISTURE CONTENT MAINTAINED WITHIN 2 PERCENT OF THE OPTIMUM.

EACH SUCCESSIVE LIFT WILL BE PLACED ON FIRM APPROVED SUBGRADE OR COMPACTED FILL. WHERE PREVIOUS LIFTS ARE FOUND TO BE UNACCEPTABLE, THE AREA WILL BE SCARIFIED, AERATED OR MOISTENED, RE-COMPACTED OR REMOVED, AND REPLACED AS REQUIRED.

DRAINAGE:

THE FILL SURFACE SHALL BE ADEQUATELY MAINTAINED DURING CONSTRUCTION. THE SURFACE SHALL BE SLOPED TO ACHIEVE SUFFICIENT DRAINAGE, AND TO PREVENT WATER FROM PONDING ON THE FILL. IF PRECIPITATION IS EXPECTED WHILE FILL CONSTRUCTION IS TEMPORARILY HALTED, THE SURFACE SHALL BE ROLLED WITH RUBBER-TIRED OR STEEL-DRUMMED EQUIPMENT TO IMPROVE SURFACE RUNOFF. FOR PLACEMENT DURING OR AFTER DIFFICULT WEATHER CONDITIONS, WET OR FROZEN MATERIAL SHALL BE REMOVED.

FINISHED GRADE TOLERANCES:

THE TOP OF EARTHWORK FOR SUBSTATION PAD AND ROADWAY TRAVEL AREAS SHALL BE WITHIN O. I O FT. ABOVE OR BELOW THE THEORETICAL GRADE.

EARTH SLOPES:

EXCAVATED SLOPES STEEPER THAN 3:1 SHALL BE ROUGH GRADED IN A MANNER TO PROVIDE HORIZONTAL RIDGES AND GROOVES HAVING AN AVERAGE DEVIATION NO GREATER THAN 0.75 FT. FROM THE THEORETICAL LINE OF THE TYPICAL CROSS SECTION.

EXCAVATED SLOPES 3:1 OR FLATTER SHALL BE UNIFORMLY FINISHED AND SHALL NOT DEVIATE FROM THE THEORETICAL PLANE SURFACE BY MORE THAN 0.50 FT.

EMBANKMENT SLOPES STEEPER THAN 3:1 SHALL BE ROUGH GRADED IN A MANNER TO PROVIDE HORIZONTAL RIDGES AND GROOVES NOT

MORE THAN 0.50 FT. FROM THE THEORETICAL LINE OF THE TYPICAL CROSS-SECTION.

EMBANKMENT SLOPES 3:1 OR FLATTER SHALL BE UNIFORMLY FINISHED AND SHALL NOT DEVIATE FROM THE THEORETICAL PLANE SURFACE BY

EMBANKMENT SLOPES 3:1 OR FLATTER SHALL BE UNIFORMLY FINISHED AND SHALL NOT DEVIATE FROM THE THEORETICAL PLANE SURFACE I MORE THAN 0.50 FT.

ROCK SLOPES:

SHALL NOT DEVIATE FROM A PLANE SURFACE BY MORE THAN 2.0 FT. AND SHALL NOT DEVIATE FROM THEIR THEORETICAL LOCATION BY MORE

THAN 2.0 FT. MEASURED ALONG ANY LINE PERPENDICULAR TO THE THEORETICAL SLOPE LINE. MATERIALS/INSTALLATION

WVDOT:

ITEMS REFERENCED TO THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION SHOWN ON THE DRAWINGS SHALL CONFORM TO THE REQUIREMENTS OF THEIR LATEST STANDARDS AND SPECIFICATIONS.

MANUFACTURERS' ITEMS:

ITEMS REFERENCED TO SPECIFIC MANUFACTURERS OR BRAND NAMES SHALL BE SUBJECT TO ANY RECOMMENDATIONS OR LIMITATIONS PERTAINING TO THEIR INSTALLATION OR USE. REQUESTS FOR SUBSTITUTIONS MUST BE APPROVED BY ENGINEERING. SUFFICIENT INFORMATION REGARDING REQUESTS MUST BE RECEIVED BY ENGINEERING 10 DAYS IN ADVANCE OF APPROVAL.

PUBLIC NOTICE SIGN REQUIREMENTS

Revised January 200

Section G.4.b.5 of the General Permit states that "Within 24 hours of filing an NOI (one to less than three acres) or a Site Registration Application (three acres or more) with DWWM, all projects shall display a sign for the duration of the construction project near the entrance of the project or, for linear projects, at a location near an active part of the project that is accessible by the public, which contains the following information using the template found in the instructions:

1) the registrant's name or the name of a contact person along with a telephone number; 2) A brief description of the project; 3) A statement indicating that the NOI or SWPPP as applicable, has been filed with the DWWM; 4) The address and telephone number of the agency where the NOI or SWPPP is maintained; and 5) That any person may obtain a copy of the NOI or SWPPP by contacting the DWWM at (800)654-5227. The sign shall be a minimum of two feet by two feet and at least three feet above ground level, clearly visible and legible from a public roadway or right-of-way. If it is not feasible to display a sign at or near the project, the registrant, with prior approval from the DWWM, may post a notice containing the foregoing information at a local public building, including, but not limited to, a town hall or public library."

A template for the sign is as follows:

The top part of the sign, down to the words "Application Date" shall be worded and formatted as shown. Remaining text shall be filled in by the applicant (Date, Name of Registrant or Contact, Project Description, and Phone) in the size and format shown. High contrast colors must be used.

For Info on NPDES
Stormwater Permit
To comment on Sediment Control Plan:
Call: 800-654-5227

DEP.Plan@wv.gov

Application date: XX/XX/XX

Name of Project,

Project Description

(area code) Tele. No.

The sign will be at least 24" x 24" with 1.6" and .8" letters.



PHASE 3
APPLICANT: VIRGINIA ELECTRIC AND POWER CO
GENERAL NOTES

PROJECT STATUS
DATE DESCRIPTION

PROJECT MANAGER:

DESIGNED:

DRAWN:

OB NUMBER:

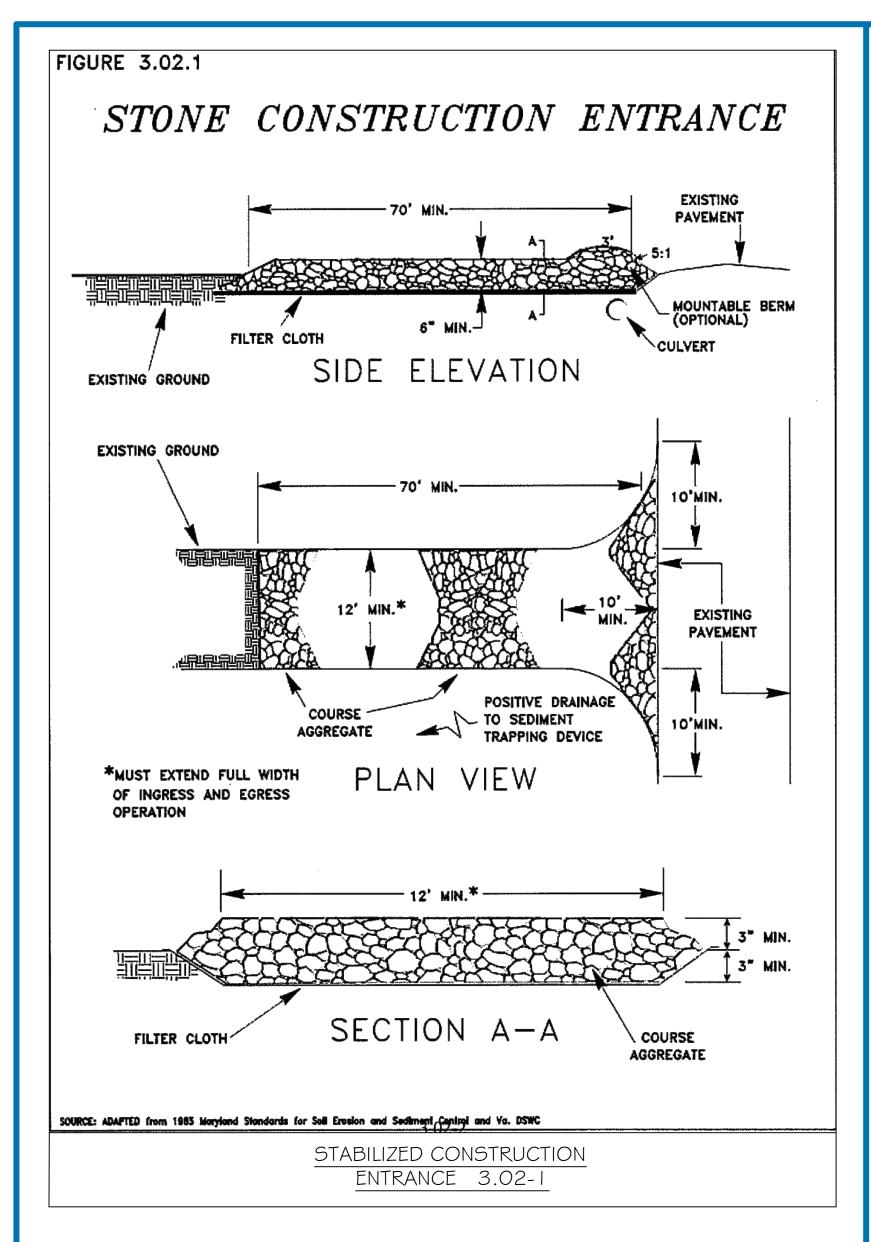
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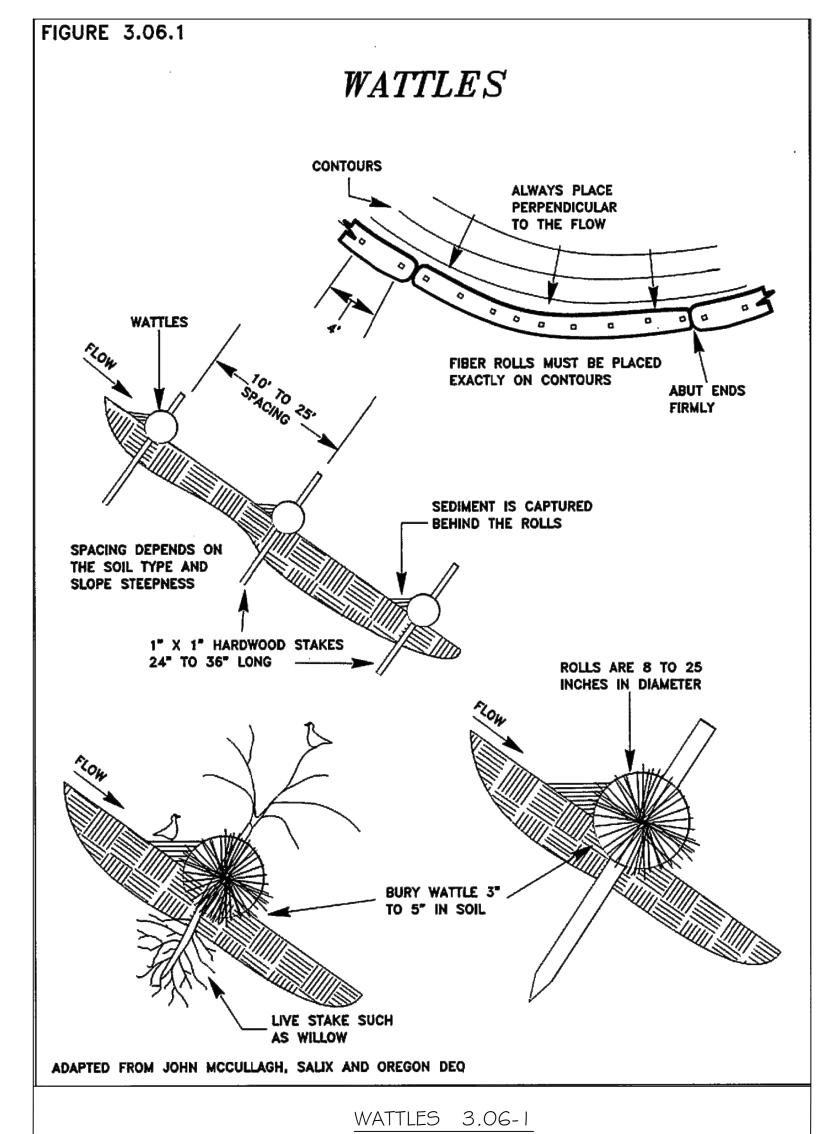
DESIGN PLAN

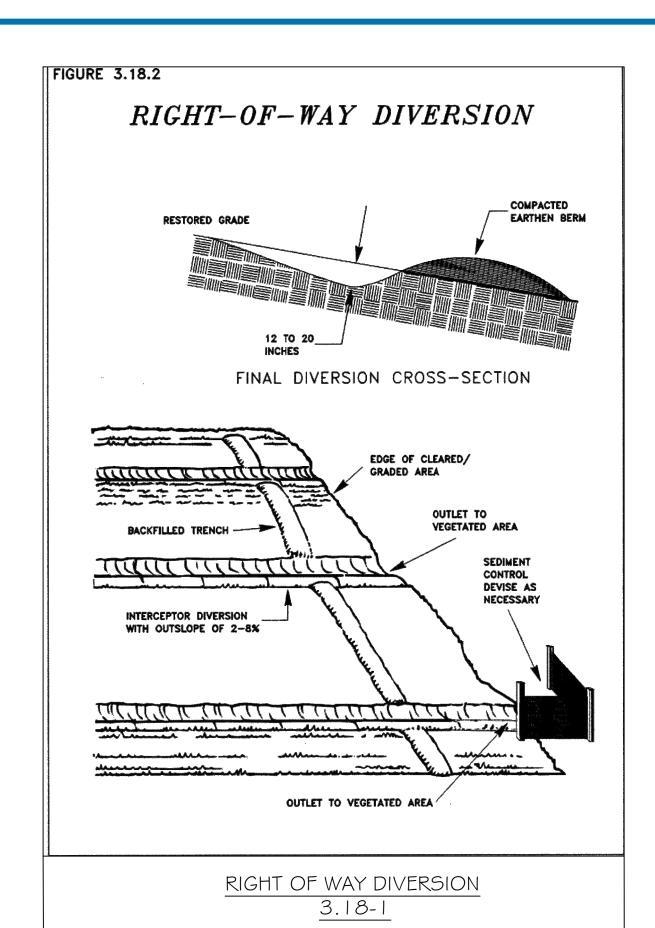
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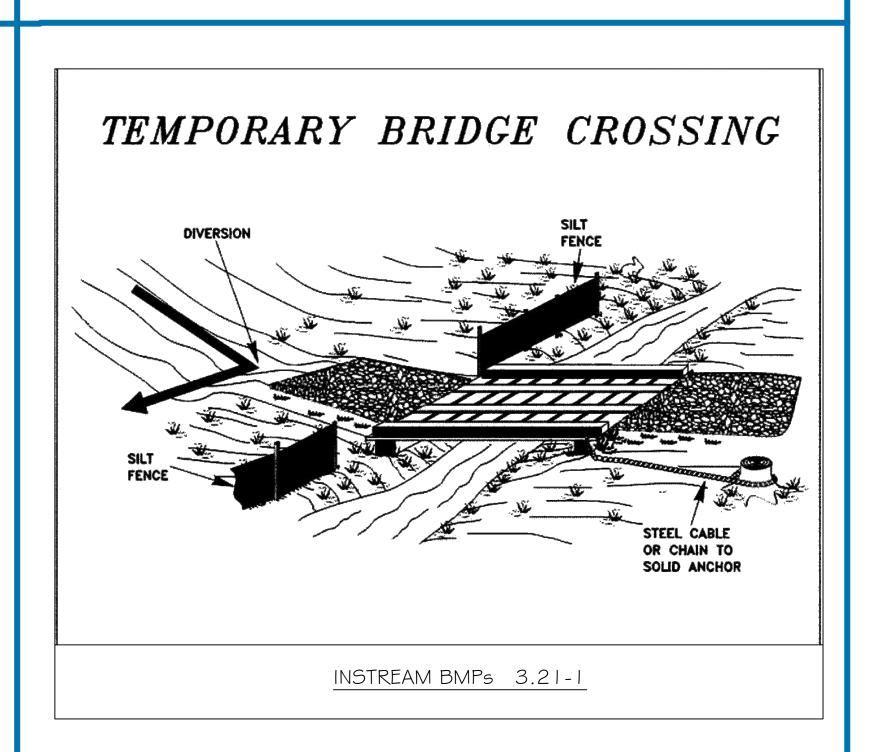
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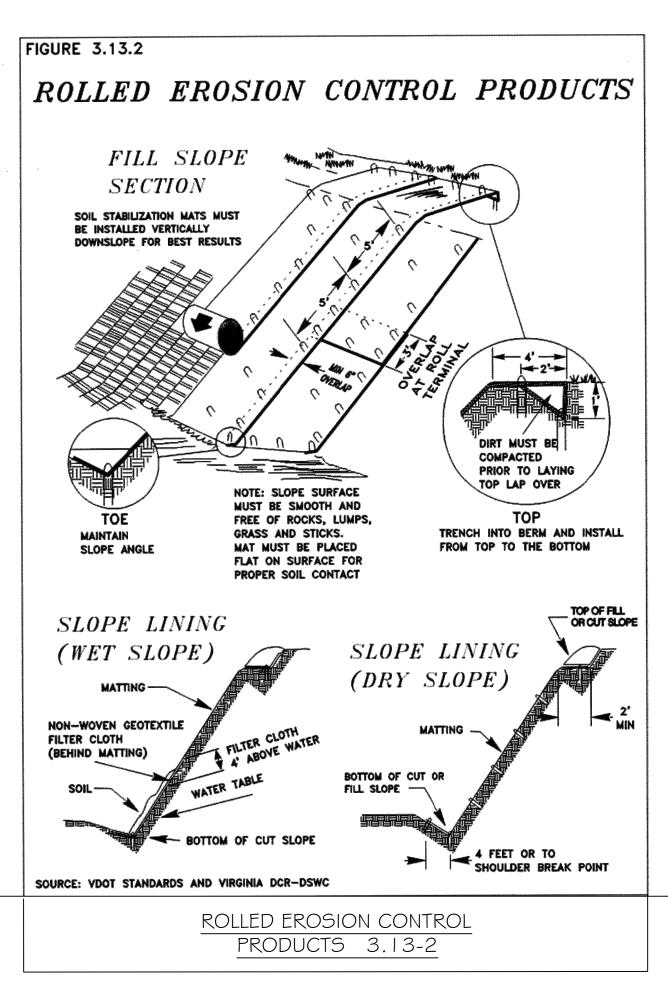
3 OF)



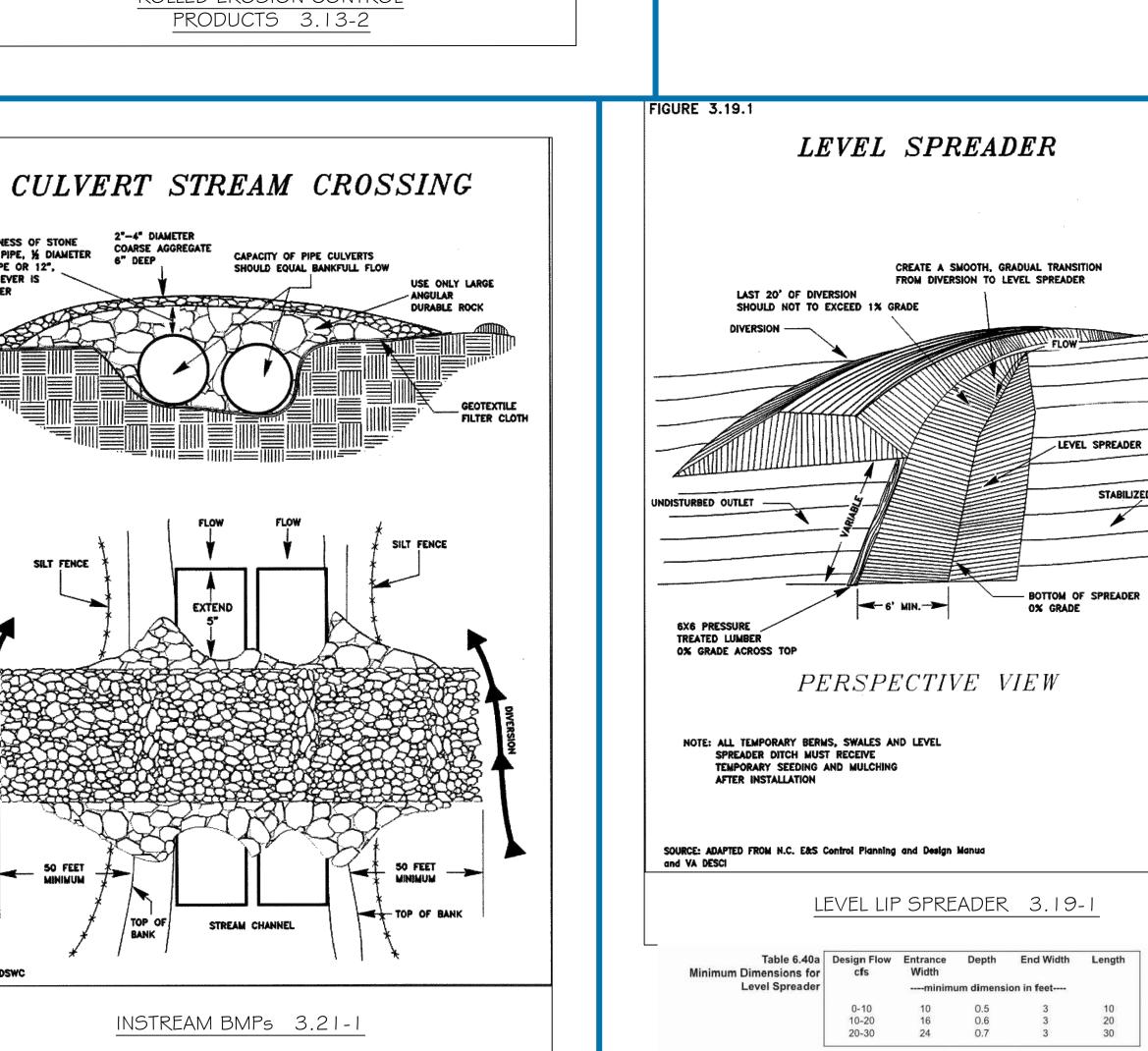


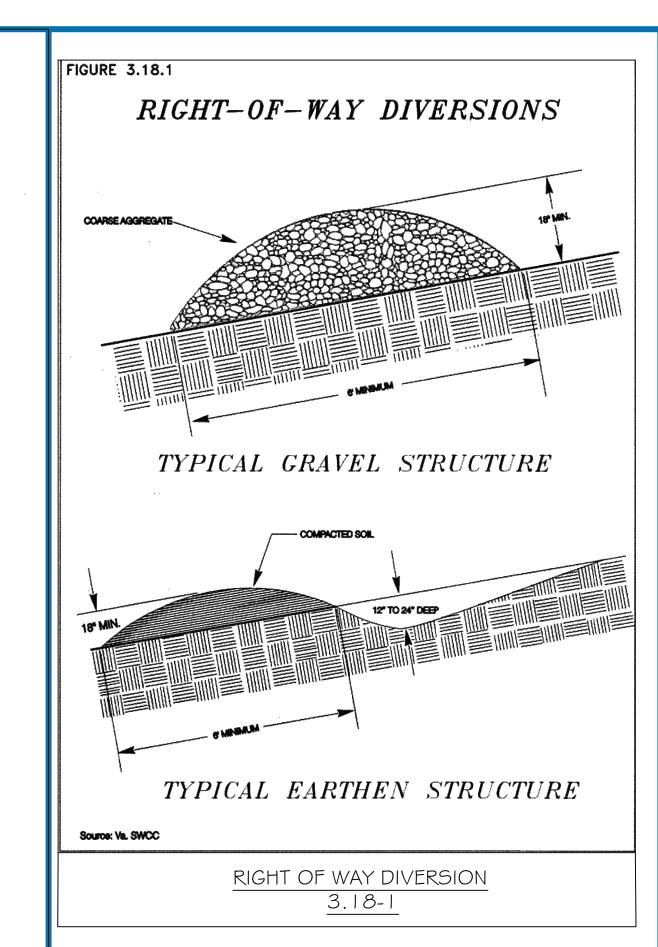






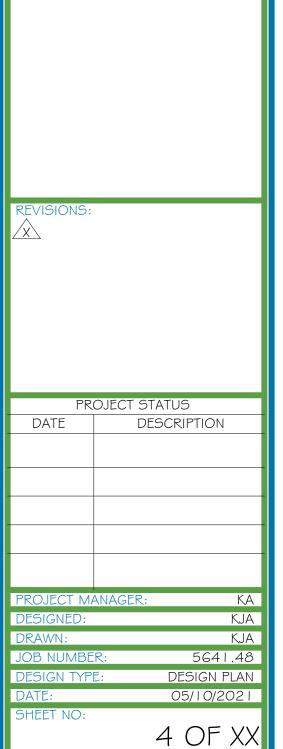
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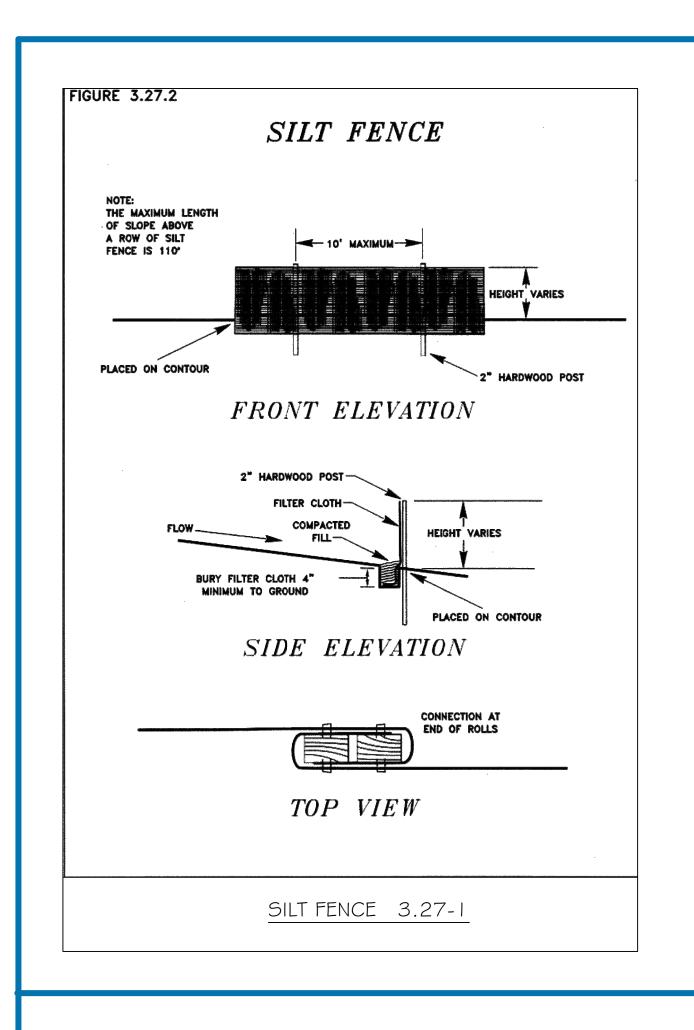


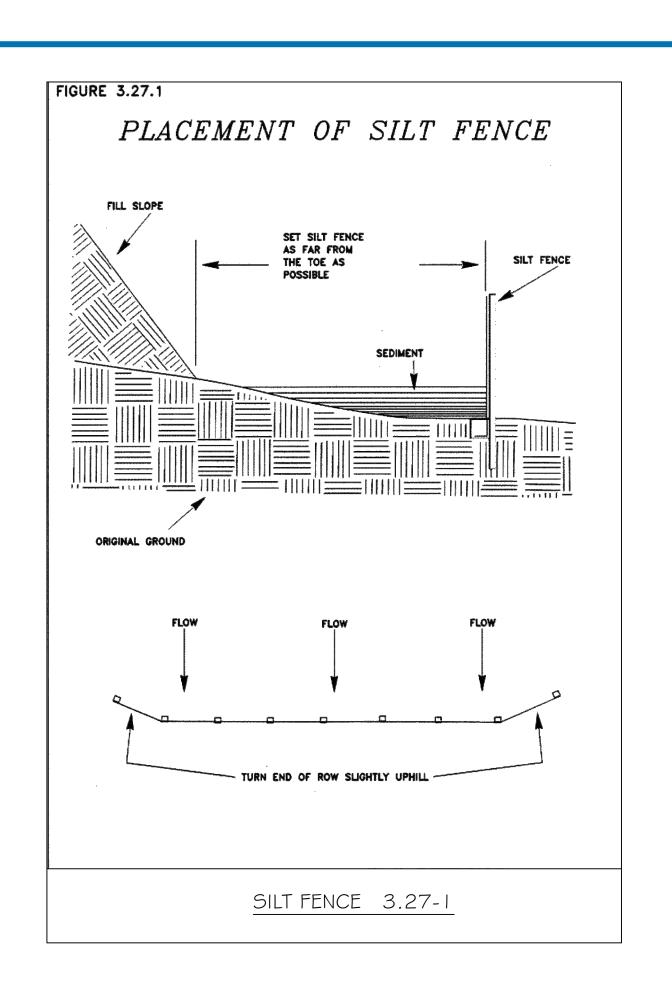


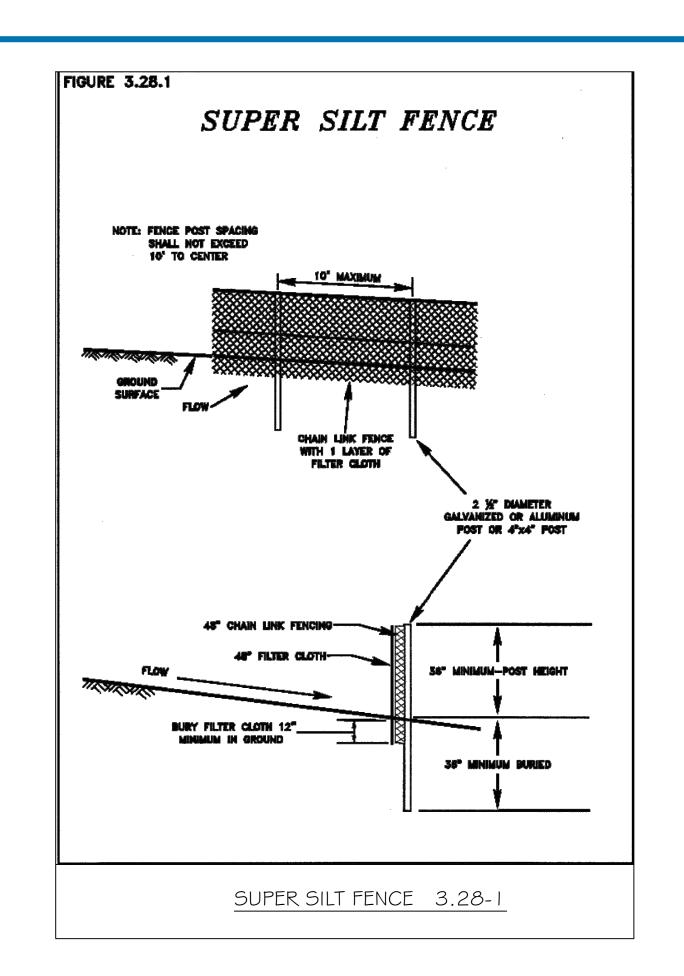


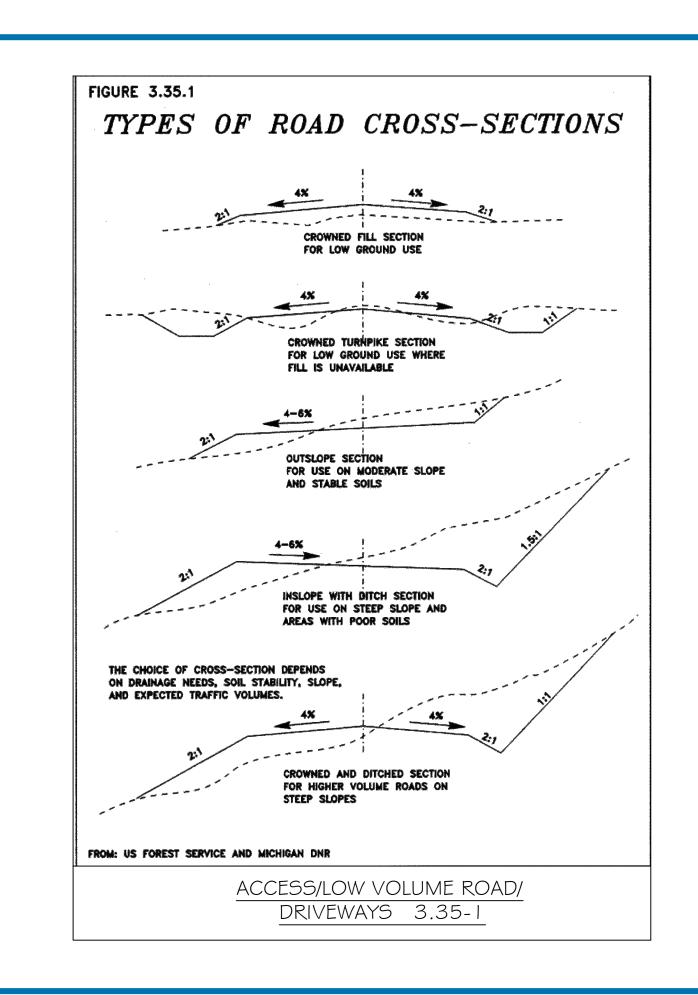
STABILIZED SLOPE

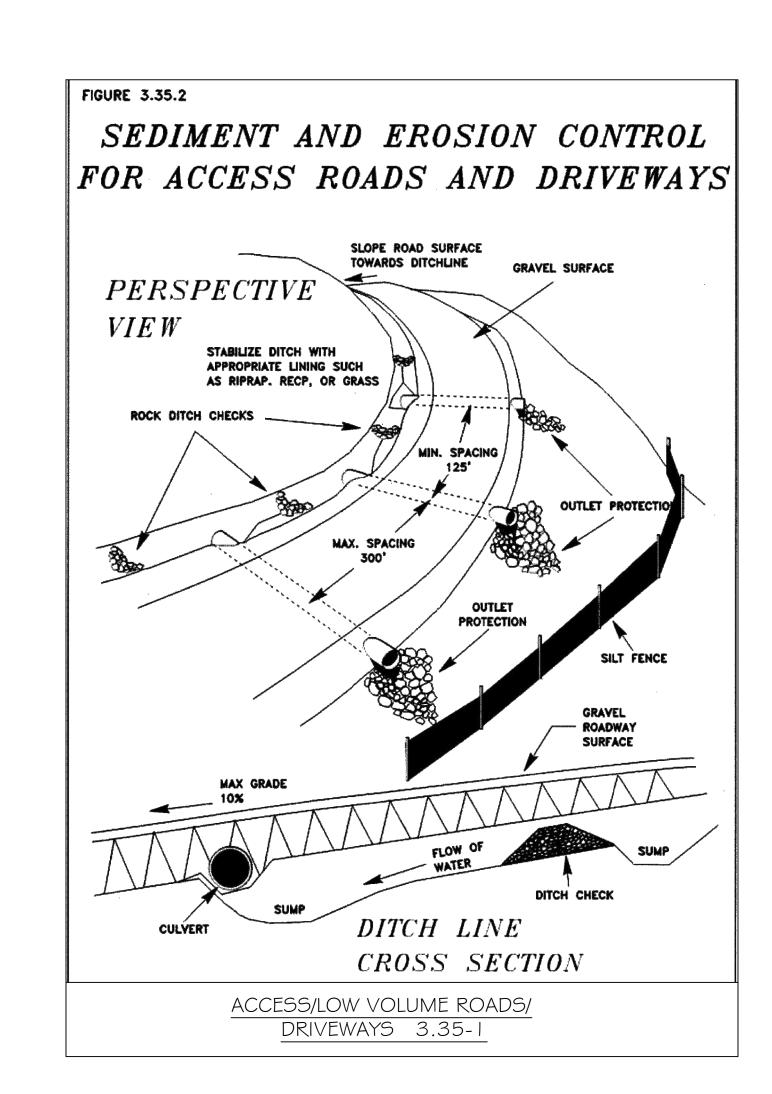


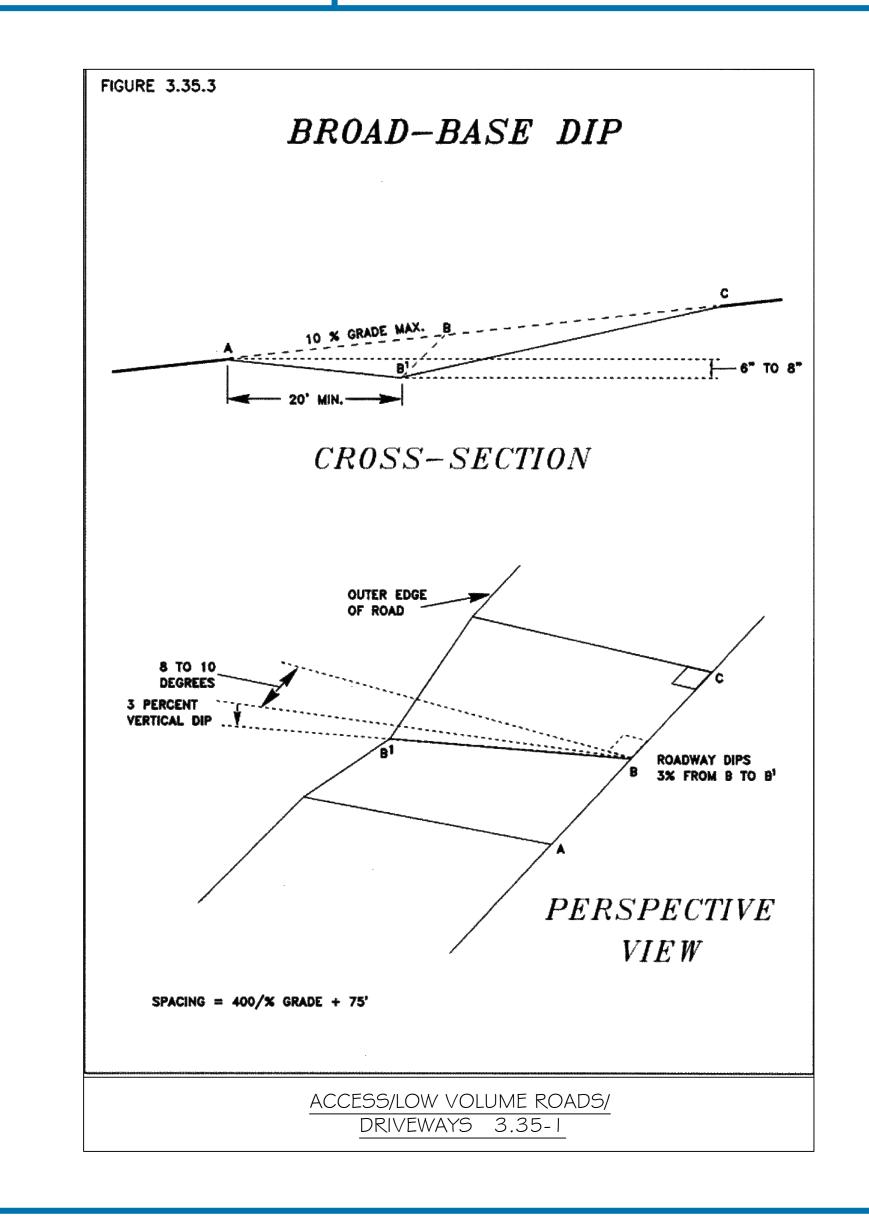


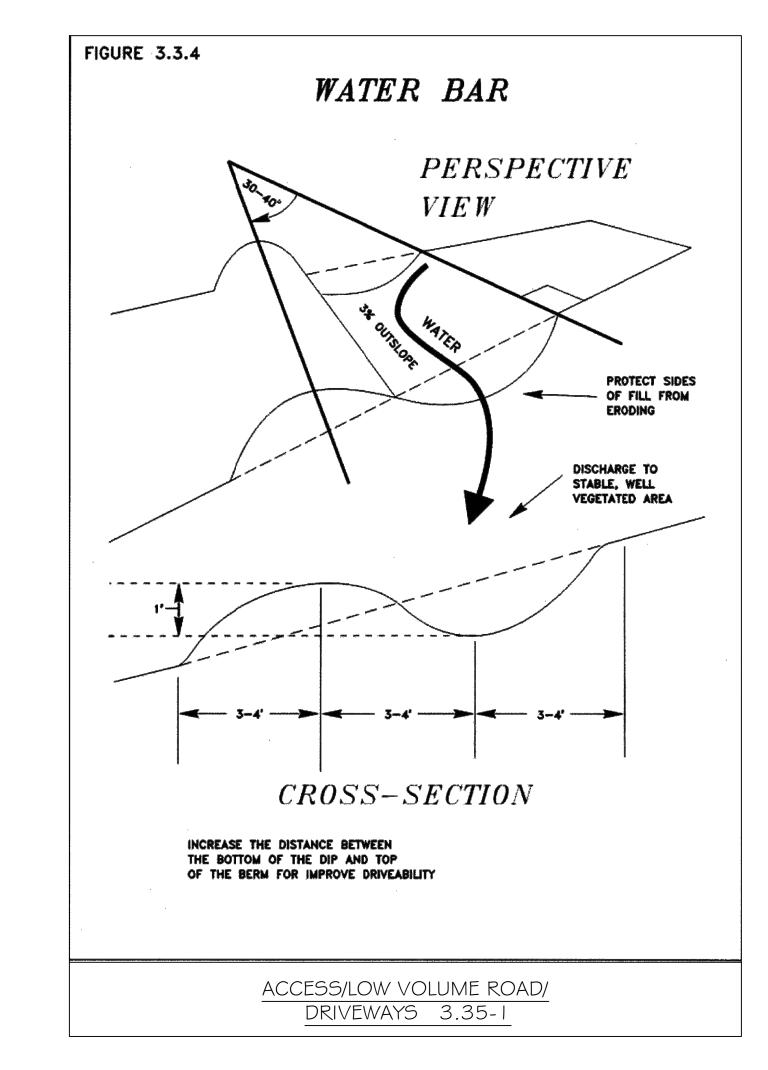














APPLICANT: VIRGINIA ELECTRIC AND POWER CON

REVISIONS:

PROJECT STATUS

DATE DESCRIPTION

PROJECT MANAGER: KA

DESIGNED: KJA

DRAWN: KJA

JOB NUMBER: 5641.48

DESIGN TYPE: DESIGN PLAN

DATE: 05/10/2021

SHEET NO: 5 OF XX



around construction activities.

Perimeter control is to be installed down slope of

any disturbed area requiring erosion and sediment

runoff. Perimeter control is effective when installed

control and filtration of soluble pollutants from

perpendicular to sheet or low concentrated flow,

and in areas that silt fence is normally considered

Above and below disturbed areas subject to sheet

Above and below exposed and erodable slopes

Around area drains or inlets located in a 'sump'

On compacted soils where trenching of silt fence

silt fence is not beneficial for tree survival or may

unnecessarily disturb established vegetation

On frozen ground where trenching of silt fence is

On paved surfaces where trenching of silt fence is

1. Perimeter control used for control of sediment

2. Contractor is required to be Filtrexx Certified

Filtrexx® CertifiedSM FilterMediaTM.

and soluble pollutants in storm runoff shall meet

Filtrexx®SoxxTM Material Specifications and use

or use pre-filled Filtrexx® SiltSoxxTM products

as determined by Filtrexx International (call Filtrexx at 877-542-7699 for a current list of

manufactured by a Filtrexx Certified Manufacturer

Along the toe of stream and channel banks

Around sensitive trees where trenching of

appropriate. Acceptable applications include:

runoff, interrill and rill erosion

is difficult or impossible

APPLICATION

Site perimeters

impossible

INSTALLATION

filtrexx® SUSTAINABLE TECHNOLOGIES

SECTION 1: CONSTRUCTION

SWPPP CUT SHEET

Filtrexx® Sediment/Perimeter Control (SiltSoxxTM)

PURPOSE & DESCRIPTION installers). Certification shall be considered Filtrexx[®] SiltSoxxTM is a three-dimensional tubular current if appropriate identification is shown sediment control and stormwater runoff filtration during time of bid or at time of application Look device typically used for Sediment/Perimeter for the Filtrexx Certified Seal. **Control** of sediment and soluble pollutants (such as 3. Perimeter control will be placed at locations phosphorus and petroleum hydrocarbons), on and

indicated on plans and in a manner as directed by the Engineer or Manufacturer. 4. Perimeter control should be installed parallel to the base of the slope or other disturbed area.

In challenging conditions (i.e., 2:1 slopes), a second perimeter control shall be constructed at the top of the slope, or staking may be increased. 5. Effective Soxx height in the field should be as follows: 5" diameter Soxx = 4" high; 8" diameter Soxx = 6.5" high; 12" diameter Soxx = 9.5" high; 18" diameter Soxx = 14.5" high; 24" diameter

6. Stakes should be installed through the middle of the perimeter control on 10 ft (3m) centers, using 2 in (50mm) by 2 in (50mm) by 3 ft (1m) wooden stakes. In the event staking is not possible, i.e., when perimeter control is used on pavement, heavy concrete blocks shall be used behind the perimeter control to help stabilize during rainfall/runoff events.

Soxx = 19" high.

7. Staking depth for sand and silt loam soils shall be 12 in (300mm), and 8 in (200mm) for clay soils.

8. Loose compost may be backfilled along the upslope side of the perimeter control, filling the seam between the soil surface and the device, improving filtration and sediment retention.

9. If the perimeter control is to be left as a permanent filter or part of the natural landscape, it may be seeded at time of installation for establishment of permanent vegetation. The Engineer will specify seed requirements. 10. Perimeter control is not to be used in

perennial, ephemeral, or intermittent streams. See design drawing schematic for correct installation

INSPECTION AND MAINTENANCE

Routine inspection should be conducted within 24 hrs of a runoff event or as designated by the regulating authority. Perimeter control should be regularly inspected to make sure they maintain their shape and are producing adequate hydraulic flowthrough. If ponding becomes excessive, additional perimeter control may be required to reduce effective slope length or sediment removal may be necessary.

Perimeter control shall be inspected until area above has been permanently stabilized and construction activity has ceased. 1. The Contractor shall maintain the perimeter

control in a functional condition at all times and it shall be routinely inspected. 2. If the perimeter control has been damaged, it

shall be repaired, or replaced if beyond repair. 3. The Contractor shall remove perimeter at the base of the upslope side of the perimeter control when accumulation has reached 1/2 of the effective height of the SoxxTM, or as directed by the Engineer. Alternatively, a new perimeter control can be placed on top of and slightly behind the original one creating more sediment

storage capacity without soil disturbance. 4. Perimeter control shall be maintained until disturbed area above the device has been permanently stabilized and construction activity has ceased.

5. The FilterMedia™ will be dispersed on site once disturbed area has been permanently stabilized, construction activity has ceased, or as determined by the Engineer. **6.** For long-term sediment and pollution control

applications, perimeter control can be seeded at

the time of installation to create a vegetative

filtering system for prolonged and increased

filtration of sediment and soluble pollutants

appropriate seed mix shall be determined by the

(contained vegetative filter strip). The

SWPPP Cut Sheet -1.1. Filtrexx® Sediment/Perimeter Control

ADDITIONAL INFORMATION For other references on this topic, including additional research reports and trade magazine and press coverage, visit the Filtrexx website at www.filtrexx.com

Filtrexx International, Technical Support 61 N Clev-Mass Rd, Ste E, Akron, OH 44333 877-542-7699 | 234-466-0810 (fax) www.filtrexx.com | info@filtrexx.com Call for complete list of international installers.

BactoLoxx, DuraSoxx, EarthBloxx, EnviroBloxx, EnviroSoxx, Filtrexx, GardenSoxx, GreenLoxx, GroSoxx, Let Nature Do It, MetalLoxx, NutriLoxx, PetroLoxx, and Trinity are Registered Trademarks of Filtrexx International.

BioSoxx, CECB [Compost Erosion Control Blanket], CSWB [Compost StormWater Blanket], DitchChexx, EdgeSaver, FilterCell, FilterMedia, FilterSoxx, GrowingMedia, InletSoxx, LivingWall, Lockdown, NitroLoxx, PhosLoxx, SiltSoxx, Soft Blocks, and Soxx are Trademarks of Filtrexx International.

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Table 1.3. Maximum Slope Lengths for Filtrexx® Perimeter Control Based on a 1 in (25 mm)/24 hr Rainfall Event.

	Waximum Stope Length Above Seatment Control in Feet (ineters)									
Slope Percent	5 in (125 mm) Sediment control	8 in (200 mm) Sediment control	12 in (300 mm) Sediment control	18 in (450 mm) Sediment control	24 in (600mm) Sediment control	32 in (800mm) Sediment control				
	4 in (100 mm)**	6.5 in (160 mm)**	9.5 in (240 mm) **	14.5 in (360 mm) **	19 in (480 mm) **	26 in (650 mm) **				
2 (or less)	360 (110)	600 (180)	750 (225)	1000 (300)	1300 (400)	1650 (500)				
5	240 (73)	400 (120)	500 (150)	550 (165)	650 (200)	750 (225)				
10	120 (37)	200 (60)	250 (75)	300 (90)	400 (120)	500 (150)				
15	85 (26)	140 (40)	170 (50)	200 (60)	325 (100)	450 (140)				
20	60 (18)	100 (30)	125 (38)	140 (42)	260 (80)	400 (120)				
25	48 (15)	80 (24)	100 (30)	110 (33)	200 (60)	275 (85)				
30	36 (11)	60 (18)	75 (23)	90 (27)	130 (40)	200 (60)				
35	36 (11)	60 (18)	75 (23)	80 (24)	115 (35)	150 (45)				
40	36 (11)	60 (18)	75 (23)	80 (24)	100 (30)	125 (38)				
45	24 (7)	40 (12)	50 (15)	60 (18)	80 (24)	100 (30)				
50	24 (7)	40 (12)	50 (15)	55 (17)	65 (20)	75 (23)				

Maximum Slone Length Above Sediment Control in Feet (meters)

Based on a failure point of 36 in (0.9 m) super silt fence (wire reinforced) at 1000 ft (303 m) of slope, watershed width equivalent to receiving length of perimeter control device, 1 in/ 24 hr (25 mm/24 hr) rain event.

** Effective height of perimeter control after installation and with constant head from runoff as determined by Ohio State University.

SWPPP Cut Sheet -1.1. Filtrexx® Sediment/Perimeter Control **Figure 1.1.** Engineering Design Drawing for Perimeter Control -2" HEADWIDTH WOODEN STAKES PLACED 10' O.C. FILTREXX® SILT SOXX™ FILTREXX® SILT SOXX™ (5", 8", 9", OR 12" TYPICAL) FILTREXX® SILT SOXX™ (5", 8", 9", 12" TYPICAL) AREA TO BE PROTECTED A STATE OF THE PROPERTY OF THE

SECTION VIEW TOP VIEW

COMPOST SOCK CONNECTION/ATTACHMENT DETAIL OVERLAPPING SECTIONS FORM CONNECTION CLOSED END - 18" min --

> FILTREXX® PYRAMID STAKING DETAIL (2) 2"x2"x48+" HARDWOOD STAKES, WRAPPED TOGETHER WITH 16 GUAGE WIRE, 10" O.C. 2'x2"x36" HARDWOOD STAKE, 10' O.C. STARTING 5' FROM ANGLED STAKES

NOTES:

1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.

2. SILT SOXX™ FILL TO MEET APPLICATION REQUIREMENTS.

3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

Construction Activities | Section 1: Erosion & Sediment Control | 603

600 | Filtrexx Low Impact Design Manual | Version 10.0

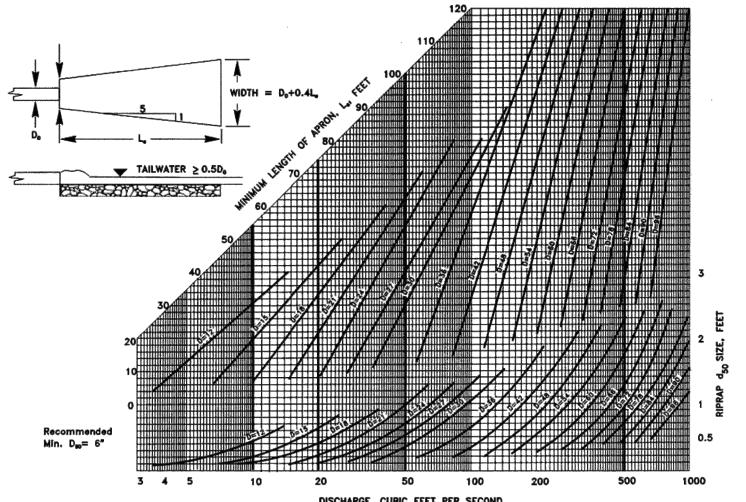
Construction Activities | Section 1: Erosion & Sediment Control | 601

602 | Filtrexx Low Impact Design Manual | Version 10.0

SWPPP CUT SHEET FILTREXX SEDIMENT/

FIGURE 3.17.1

DESIGN OF OUTLET PROTECTION FROM A ROUND PIPE FLOWING FULL MAXIMUM TAILWATER CONDITION ($T_w \ge 0.5$ DIAMETER) (USDA-NRCS)



3.17-10

OUTLET PROTECTION 3.17.10

PERIMETER CONTROL 6.1.1

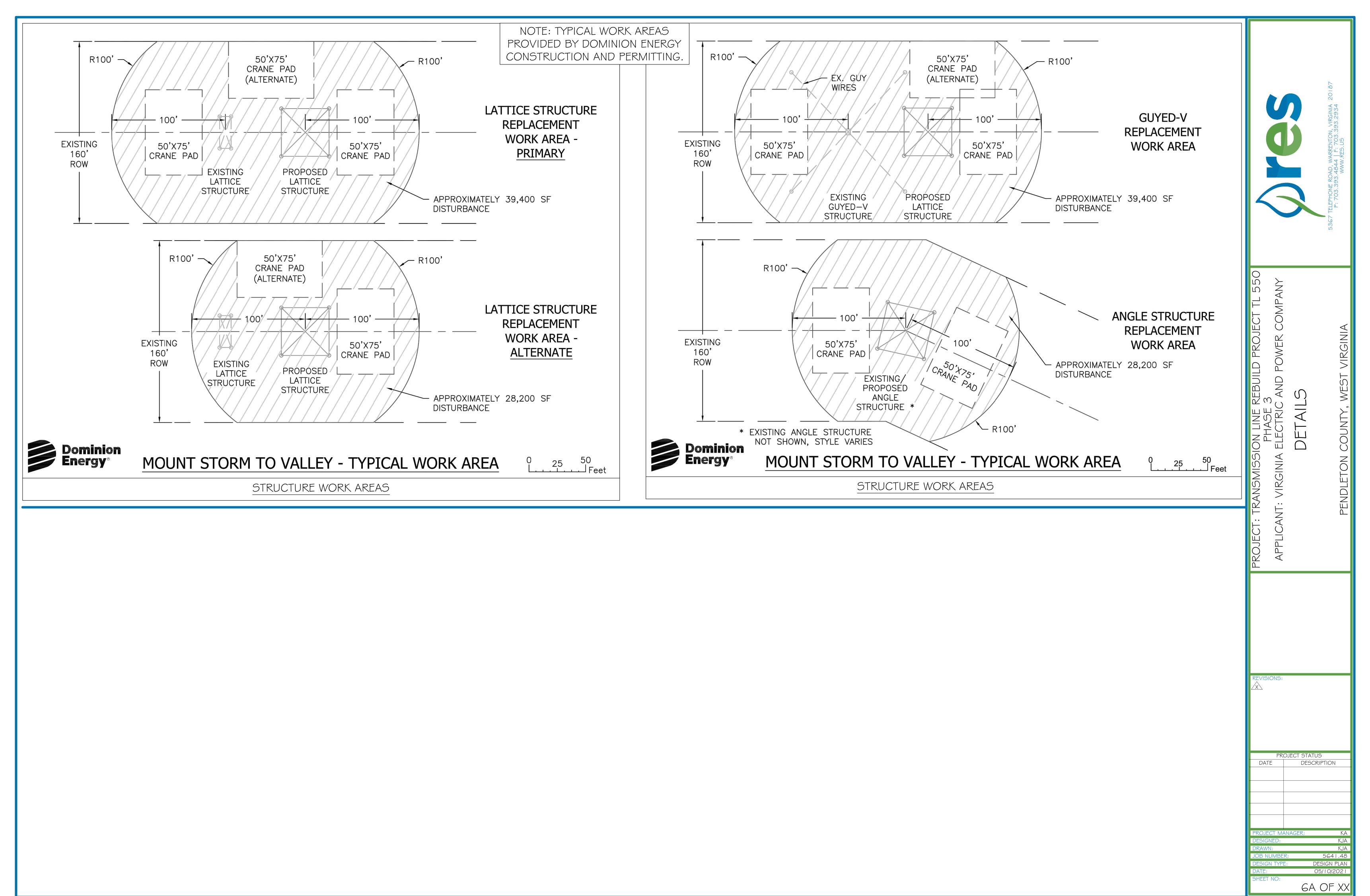
let nature do it.º

PROJECT STATUS DESCRIPTION

5641.48 DESIGN PLAN

R:\Rescad\Projects\5641.48-TL 550\Engineering\Graphics\PHASE 3 - WV\Plan Sheets\DETAILS.dwg, 5/10/2021 4:05:05 PM, nchilcot

AND



DOMINION ENERGY SITE PREPARATION PERFORMANCE SPECIFICATIONS - WEST VIRGINIA

PREFACE

IT IS THE INTENT OF THESE SPECIFICATIONS TO HAVE A COMPLETELY PREPARED SITE FOR THE CONSTRUCTION OF AN ELECTRICAL FACILITY AT THE COMPLETION OF THE "WORK" AS INDICATED ON THE DRAWINGS. SPECIFICATIONS, OR OTHER DOCUMENTS PROVIDED

THE REGULATIONS OF ALL LOCAL, STATE, OR FEDERAL GOVERNMENTAL BODIES HAVING JURISDICTION OVER THE WORKING AREAS SHALL BE OBSERVED AT ALL TIMES.

ANY SPECIFICATIONS OR INSTRUCTIONS APPEARING ON THE DRAWINGS SHALL HAVE PRECEDENCE OVER THE WRITTEN SPECIFICATIONS WHICH APPEAR HEREIN. IN THE EVENT THAT A DISCREPANCY OR OMISSION HAS OCCURRED, DOMINION SHALL BE CONSULTED FOR RESOLUTIONS

ALL "WORK" SHALL BE PERFORMED IN A MANNER CONSISTENT WITH THE BEST PRACTICES OF THE TRADES INVOLVED.

RIGHTS-OF-WAY SHOWN ON THE DRAWINGS. THE CONTRACTOR WILL RECOGNIZE AND ABIDE BY ALL TERMS AND CONDITIONS OF PERMITS. EASEMENTS, AND AGREEMENTS RELATING TO THE PROJECT.

CLEARING AND GRUBBING

LIMITS FOR CLEARING AND/OR GRUBBING SHALL BE AS DEFINED ON THE DRAWINGS.

CLEARING SHALL CONSIST OF REMOVAL AND DISPOSAL OF BRUSH. DOWNED TIMBER, LOGS, STANDING TREES AND SNAGS, OTHER GROWTH AND ANY ITEMS THAT WOULD INTERFERE WITH CONSTRUCTION OPERATIONS.

GRUBBING SHALL CONSIST OF REMOVAL AND DISPOSAL OF STUMPS, BURIED LOGS, ROOTS GREATER THAN 1/2 " DIAMETER, AND ANY OTHER ORGANIC MATERIAL BELOW THE GROUND SURFACE. ALL CLEARED AREAS WILL BE GRUBBED UNLESS OTHERWISE NOTED.

DISPOSAL OF CLEARED/GRUBBED MATERIAL BY BURNING SHALL ONLY BE USED WHEN WRITTEN APPROVAL IS OBTAINED FROM LOCAL AUTHORITIES AND DOMINION. OTHERWISE, DISPOSAL SHALL BE BY METHODS APPROVED BENCHING SHALL BE REQUIRED FOR ALL FILL EMBANKMENTS PLACED ON BY THE GWNF OR OUTSIDE THE LIMITS OF GWNF LAND.

PER THE PROJECT'S ENVIRONMENTAL ASSESSMENT: WITHIN THE ROW, AT CRANE PAD SITES OUTSIDE THE ROW, AND WITHIN THE ROW TO ACCOMMODATE NERC CONDUCTOR-TO-GROUND CLEARANCE STANDARDS: TREES ARE FELLED. TRIMMED AS NEEDED. MOVED AWAY FROM THE CLEARED AREA. AND LEFT ON SITE.

TREE CLEARING FOR CONSTRUCTION OF TEMPORARY OR PERMANENT ROADS: TREES ARE FELLED, TRIMMED AS NEEDED, AND EITHER LEFT IN PLACE BELOW THE ROAD OR CHIPPED. TREES WITH DBH LESS THAN 7 INCHES ARE CHIPPED AND SCATTERED INTO THE WOODS TO A DEPTH OF NO MORE THAN 2 INCHES TO PREVENT A MULCHING EFFECT

TREE CLEARING FOR CONSTRUCTION OF TEMPORARY AND PERMANENT ROADS, WITHIN THE SHENANDOAH MOUNTAIN CREST (MA 8E7) AND ADJACENT WETLANDS, RIPARIAN AREAS, OR KNOWN LOCATIONS OF THREATENED, ENDANGERED, OR SENSITIVE SPECIES: TREES ARE FELLED, TRIMMED AS NEEDED. MOVED AWAY FROM THE CLEARED AREA. AND LEFT ON SITE. NO CHIPPING OR SPREADING OF CHIPS IS PERMITTED WITHIN THESE SENSITIVE AREAS.

TOPSOIL

ALL TOPSOIL AND SURFACE SOILS CONTAINING ORGANIC MATERIAL SHALL BE REMOVED FROM THE GRUBBED AREA. TOPSOIL SHALL BE STOCKPILED FOR FUTURE USE IN APPROVED LOCATIONS UNLESS OTHERWISE SHOWN ON THE DRAWINGS.

TOPSOIL SHALL NOT BE USED AS, OR MIXED WITH, FILL MATERIAL IN THE THE DRAWINGS.

FREE OF CINDERS, DEBRIS, AND STONES. UNSUITABLE AND EXCESS TOPSOIL MATERIAL SHALL BE DISPOSED OFFSITE.

EARTHWORK

EXCAVATION: EXCAVATION SHALL BE ACCOMPLISHED BY CUTTING ACCURATELY TO THE CROSS SECTIONS, GRADES, AND ELEVATIONS SHOWN ON THE DRAWINGS.

SOFT, UNSTABLE, OR OTHERWISE UNSATISFACTORY MATERIALS ENCOUNTERED AT THE REQUIRED GRADES SHALL BE REMOVED AS DIRECTED AND REPLACED WITH APPROVED, PROPERLY COMPACTED MATERIAL

COMMON EXCAVATION SHALL INCLUDE ALL MATERIAL WHICH CAN BE REMOVED BY COMMON EARTH EXCAVATION EQUIPMENT, OTHER THAN SOLID ROCK OR BOULDERS AND DETACHED PIECES OF ROCK, EACH EXCEEDING 2 CUBIC YARDS IN VOLUME.

ROCK EXCAVATION SHALL BE MATERIAL WHICH REQUIRES THE USE OF PNEUMATIC HAMMERS AND/OR EXPLOSIVES FOR REMOVAL.

ALL "WORK" SHALL BE PERFORMED WITHIN THE LIMITS OF THE PROPERTY / SITE PREPARATION: IF EARTHWORK OPERATIONS ARE PERFORMED DURING WET SEASONS, CONTRACTOR SHALL AVOID OPERATING EQUIPMENT ON SATURATED SOILS. ANY WET SUBGRADE AREAS WHICH RECEIVE COMPACTED FILL SHALL BE DRAINED AND ALLOWED TO DRY. THE EXPOSED SUBGRADES OF THE BUILDING PAD AND ROADBEDS SHALL BE PROOFROLLED TO DETECT UNSUITABLE SOIL CONDITIONS. PROOFROLLING SHALL BE DONE AFTER A SUITABLE PERIOD OF DRY WEATHER TO AVOID DEGRADING THE SUBGRADE. PROOFROLLING SHALL BE PERFORMED WITH A HEAVILY LOADED DUMP TRUCK OR WITH SIMILAR APPROVED CONSTRUCTION EQUIPMENT.

> SOFT MATERIALS ENCOUNTERED SHALL BE COMPLETELY EXCAVATED AND REPLACED WITH APPROVED FILL MATERIALS.

BENCHING: BENCHING SHALL CONSIST OF A SERIES OF HORIZONTAL CUTS BEGINNING AT THE TOE OF THE EXISTING SLOPED SURFACE AND CONTINUING AT EACH VERTICAL INTERSECTION OF THE PREVIOUS CUT. SATISFACTORY MATERIAL REMOVED DURING THIS OPERATION SHALL BE RECOMPACTED ALONG WITH THE NEW EMBANKMENT MATERIAL AS GENERALLY SPECIFIED, EXCEPT MOISTURE CONTENT SHALL BE MAINTAINED WITHIN 10 PERCENT OF THE OPTIMUM.

EXISTING SLOPES AS FOLLOWS:

SLOPES STEEPER THAN 4:1 BUT NOT STEEPER THAN 11/2:1, THE BENCH SHALL BE AT LEAST 6 FT. IN WIDTH.

EMBANKMENT: EMBANKMENT WORK SHALL CONSIST OF THE PLACEMENT AND COMPACTION OF FILL MATERIAL ABOVE THE NATURAL GROUND OR OTHER SURFACE IN CONFORMANCE WITH THE DRAWINGS.

MATERIALS: APPROVED SOILS USED IN COMPACTED FILLS SHALL BE FREE OF DEBRIS AND FIBROUS ORGANIC MATERIAL. FROZEN MATERIAL WILL NOT BE PERMITTED IN THE FILL. SATISFACTORY MATERIALS SHALL COMPRISE THOSE CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL SYSTEM, ASTM D-2487 AS GW, GP, SW, SP, SM, AND SC. THESE MATERIALS SHALL POSSESS A MAXIMUM DRY DENSITY OF 100 #/CU.FT. OR GREATER REFERENCED TO ASTM D-698 STANDARD PROCTOR. SOILS SHALL HAVE A LIQUID LIMIT LESS THAN 40 PERCENT AND A PLASTICITY INDEX LESS THAN 15.

OTHER MATERIALS, WHEN APPROVED BY ENGINEERING, MAY BE PERMITTED IN FILL AREAS.

UNSATISFACTORY SOILS INCLUDE THOSE CLASSIFIED AS PT, OH OR OL, CH, MH, CL AND ML, AS REFERENCED TO ASTM D-2487.

COMPACTION: COMPACTION EQUIPMENT SHALL CONSIST OF VIBRATORY OR TAMPING ROLLERS, SHEEPSFOOT ROLLER, PNUEMATIC-TIRED ROLLERS, THREE-WHEEL POWER ROLLERS, WALK BEHIND VIBRATORY ROLLERS, VIBRATORY PLATE OR OTHER APPROVED EQUIPMENT WELL SUITED TO THE SOIL BEING COMPACTED.

APPROVED FILL MATERIAL SHALL BE PLACED IN UNIFORM HORIZONTAL LIFTS OF APPROXIMATELY 8" DEPTH (LOOSE MEASUREMENT), EXCEPT FOR ROAD CONSTRUCTION OF EARTH EMBANKMENTS UNLESS OTHERWISE SHOWN ON MATERIALS ABOVE SUBGRADE ELEVATION AND THE UPPER 12" OF BUILDING PADS WHICH REQUIRE 6" LIFTS. WHERE WALK BEHIND ROLLERS AND TOPSOIL MATERIAL USED AS A SURFACE DRESSING SHALL BE REASONABLY VIBRATORY PLATE COMPACTORS ARE USED, THE LIFT THICKNESS SHALL NO EXCEED 4".

EARTHWORK CONT'D

GENERALLY, FILLS SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D-698), WITH MOISTURE CONTENT RANGING BETWEEN LESS THAN 3 PERCENT UP TO THE OPTIMUM AS DETERMINED BY THE PROCTOR DENSITY TEST. THE UPPER 12" OF ROADBEDS AND CONTROL ENCLOSURE BUILDING PADS REQUIRE 98 PERCENT COMPACTION REFERENCED TO ASTM D-698, WITH MOISTURE CONTENT MAINTAINED WITHIN 2 PERCENT OF THE OPTIMUM. EACH SUCCESSIVE LIFT WILL BE PLACED ON FIRM APPROVED SUBGRADE OR COMPACTED FILL. WHERE PREVIOUS LIFTS ARE FOUND TO BE UNACCEPTABLE, THE AREA WILL BE SCARIFIED, AERATED OR MOISTENED, RECOMPACTED OR REMOVED, AND REPLACED AS REQUIRED.

DRAINAGE: THE FILL SURFACE SHALL BE ADEQUATELY MAINTAINED DURING CONSTRUCTION. THE SURFACE SHALL BE SLOPED TO ACHIEVE SUFFICIENT DRAINAGE, AND TO PREVENT WATER FROM PONDING ON THE FILL. IF PRECIPITATION IS EXPECTED WHILE FILL CONSTRUCTION IS TEMPORARILY HALTED. THE SURFACE SHALL BE ROLLED WITH RUBBER-TIRED OR STEEL-DRUMMED EQUIPMENT TO IMPROVE SURFACE RUNOFF. FOR PLACEMENT DURING OR AFTER DIFFICULT WEATHER CONDITIONS, WET OR FROZEN MATERIAL SHALL BE REMOVED.

FINISHED GRADE TOLERANCES: THE TOP OF EARTHWORK FOR SUBSTATION PAD AND ROADWAY TRAVEL AREAS SHALL BE WITHIN 0.10 FT. ABOVE OR BELOW THE THEORETICAL GRADE.

EARTH SLOPES: EXCAVATED SLOPES STEEPER THAN 3:1 SHALL BE ROUGH GRADED IN A MANNER TO PROVIDE HORIZONTAL RIDGES AND GROOVES HAVING AN AVERAGE DEVIATION NO GREATER THAN 0.75 FT. FROM THE THEORETICAL LINE OF THE TYPICAL CROSS SECTION.

EXCAVATED SLOPES 3:1 OR FLATTER SHALL BE UNIFORMLY FINISHED AND SHALL NOT DEVIATE FROM THE THEORETICAL PLANE SURFACE BY MORE THAN 0.50 FT.

EMBANKMENT SLOPES STEEPER THAN 3:1 SHALL BE ROUGH GRADED IN A MANNER TO PROVIDE HORIZONTAL RIDGES AND GROOVES NOT MORE THAN 0.50 FT. FROM THE THEORETICAL LINE OF THE TYPICAL CROSS SECTION.

EMBANKMENT SLOPES 3:1 OR FLATTER SHALL BE UNIFORMLY FINISHED AND SHALL NOT DEVIATE FROM THE THEORETICAL PLANE SURFACE BY MORE THAN 0.50 FT.

ROCK SLOPES: SHALL NOT DEVIATE FROM A PLANE SURFACE BY MORE THAN 2.0 FT. AND SHALL NOT DEVIATE FROM THEIR THEORETICAL LOCATION BY MORE THAN 2.0 FT. MEASURED ALONG ANY LINE PERPENDICULAR TO THE THEORETICAL SLOPE LINE.

MATERIALS / INSTALLATION

WVDOH & VDOT: ITEMS REFERENCED TO THE WEST VIRGINIA DEPARTMENT OF HIGHWAYS OR VIRGINIA DEPARTMENT OF TRANSPORTATION SHOWN ON THE DRAWINGS SHALL CONFORM TO THE REQUIREMENTS OF THEIR LATEST STANDARDS AND SPECIFICATIONS.

MANUFACTURERS' ITEMS: ITEMS REFERENCED TO SPECIFIC MANUFACTURERS OR BRAND NAMES SHALL BE SUBJECT TO ANY RECOMMENDATIONS OR LIMITATIONS PERTAINING TO THEIR INSTALLATION OR USE.

REQUESTS FOR SUBSTITUTIONS MUST BE APPROVED BY ENGINEERING. SUFFICIENT INFORMATION REGARDING REQUESTS MUST BE RECEIVED BY ENGINEERING 10 DAYS IN ADVANCE OF APPROVAL.

TEMPORARY STREAM CROSSINGS

EXISTING STREAMS SHALL BE CROSSED AS DEPICTED ON PLANS. FORD CROSSINGS WILL EITHER BE BY PRE-FABRICATED STEEL BRIDGES OR LAMINATED EMTEK BRIDGE MATERIAL AS SHOWN ON PLANS. BRIDGE DESIGN PROVIDED BY MANUFACTURER OR OTHERS.

EROSION AND SEDIMENT CONTROL MEASURES (TYP. SILT FENCE WINGWALLS PER DETAIL 9 ON SHEET C7-05) SHALL BE INSTALLED AT TEMPORARY STREAM CROSSINGS TO PREVENT SEDIMENT TRANSPORT TO STREAM EXISTING CULVERTS (DAMAGED, CORRODED, OR WITH INSUFFICIENT COVER FOR CONSTRUCTION TRAFFIC) SHALL BE SPANNED WITH TIMBER MAT BRIDGES, APPROXIMATE TIMBER MAT BRIDGE LENGTHS ARE SHOWN ON PLANS. FOR ANY EXISTING CULVERT NOT DEPICTED ON THE PLANS, CONTRACTOR TO DETERMINE REQUIRED TIMBER MAT BRIDGE LENGTH



Dewberry Engineers Inc

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CHECKED BY	KP
DATE	07/30/2021

SITE PREPARATION PERFORMANCE **SPECIFICATIONS**

PROJECT NO. 50106442

SHEET NO



Dewberry Engineers Inc.

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07/30/2021

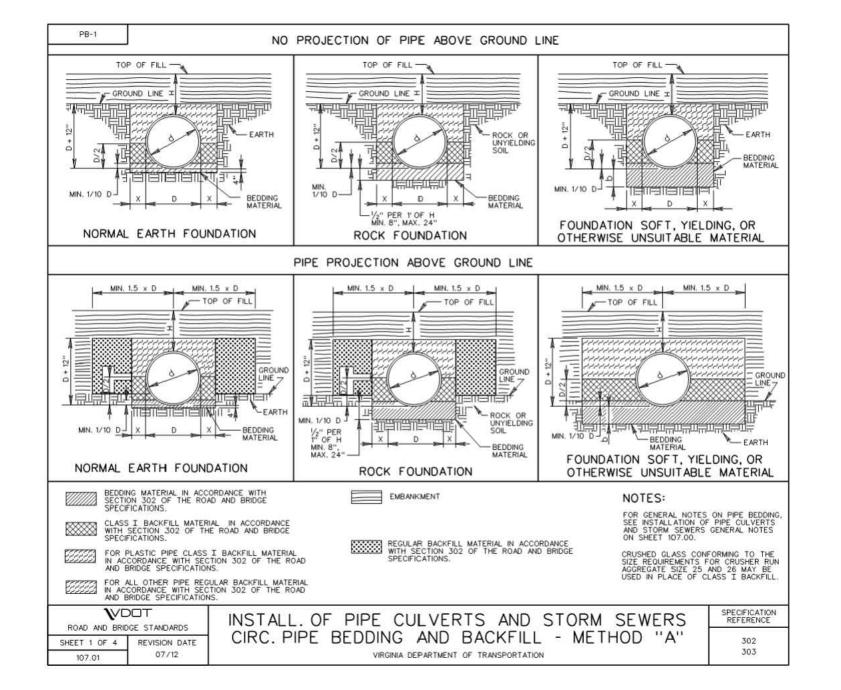
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SHEET NO.

C7-02



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4805 LAKE BROOK DRIVE 4805 LAKE BROOK DRIVE SUITE 200 GLEN ALLEN, VA 23060 804.290.7957 (PHONE) 804.290.7928 (FAX)

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PROJECT NO. 50106442

C7-03

2016 ROAD & BRIDGE STANDARDS

disease.	MAXIMUM HEIGHT OF COVER IN FEET					MINIMUM SHEET	
PIPE DIAMETER	AREA	SHEET	THICKNE	GAUGE)	THICKNESS FOR ENTRANCE PIPES		
INCHES	SQ. FT.	0.060	0.075 (14)	0.105	0.135	0.164 (8)	WITH LESS THAN 1 FT. COVER (GAUGE)
12	0.8	141	176	247	318	389	16
15	1.2	112	141	197	254	311	16
18	1.8	93	117	164	212	259	16
21	2.4	80	100	140	181	221	16
24	3.1	69	87	123	158	193	16
27	4.0		77	109	140	172	14
30	4.9		69	98	126	154	14
33	5.9		63	88	114	140	14
36	7.1		57	81	105	128	14
42	9.6			69	89	109	12
48	12.6			60	78	95	12
54	15.9			53	69	84	12
60	19.6				61	75	10
66	23.8					68	8
72	28,3					62	8

0.5250	MAXIMUM HEIGHT OF COVER IN FEET						
PIPE DIAMETER	AREA	SHEET THICKNESS IN INCHES (GAUGE)				GAUGE)	
INCHES	SQ. FT.	0.060	0.075 (14)	0.105	0.135 (10)	0.164 (8)	
36	7.1	52	66	93	126	148	
42	9.6	44	56	80	10.7	127	
48	12.6	38	49	69	93	110	
54	16.0	34	43	61	83	98	
60	19.6	30	38	54	74	87	
66	23.8	26	34	49	67	79	
72	28.3	24	31	45	61	72	
78	33.2		28	41	56	66	
84	38.5			37	51	61	
90	44.2			34	47	57	
96	50.3			32	44	53	
102	56.7				41	49	
108	63.6				38	46	
114	70.9					43	
120	78.5					41	

NOTES:

- COVER HEIGHTS INDICATED IN TABLES ARE FOR FINISHED CONSTRUCTION, USING AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND ASSUMING 25% METAL LOSS AT END OF DESIGN LIFE.
- TO PROTECT PIPE DURING CONSTRUCTION, MINIMUM HEIGHT OF COVER TO BE IN ACCORDANCE WITH TABLE A PRIOR TO ALLOWING CONSTRUCTION TRAFFIC TO CROSS INSTALLATION. THE COVER SHALL EXTEND THE FULL LENGTH OF THE PIPE. THE APPROACH FILL RAMP IS TO EXTEND A MINIMUM OF 20 DIAMETERS ON EACH SIDE OF THE PIPE OR THE INTERSECTION WITH A CUT.
- 3. STANDARD MINIMUM FINISHED HEIGHT OF COVER FOR ALL PIPES, EXCEPT THOSE UNDER ENTRANCES, SHALL BE 2.0' OR 1/2 DIAMETER, WHICHEVER IS GREATER. IN CASES IN WHICH THESE COVER HEIGHT OF 1.0' OR 1/2 DIAMETER, WHICHEVER IS GREATER, WILL BE ALLOWED ONLY IF ALL POSSIBLE MEANS TO OBTIAN THE STANDARD VALUE HAVE BEEN EXHAUSTED. THE MINIMUM FINISHED HEIGHT OF COVER FOR PIPES UNDER ENTRANCES IS 9" FOR PIPE DIAMETERS EQUAL TO OR LESS THAN 18" AND 12" OR 1/2 DIAMETER, WHICHEVER IS GREATER, FOR PIPE DIAMETERS GREATER THAN 18".
- 4. SEE STANDARD PB-1 FOR PIPE BEDDING AND BACKFILL REQUIREMENTS.

TABLE A				
PIPE DIAMETER	MINIMUM COVER HEIGHT DURING CONSTRUCTION (SEE NOTE 2)			
12" TO 27"	18"			
30" AND OVER	EQUAL TO DIAMETER			

SPECIFICATION REFERENCE	A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE. CORRUGATED ALUMINUM ALLOY PIPE	VD	
232 302	HEIGHT OF COVER TABLE FOR HL-93 LIVE LOAD	ROAD AND BRID REVISION DATE	SHEET 4 OF 18
302	VIRGINIA DEPARTMENT OF TRANSPORTATION	11/15	107.08

2016 ROAD & BRIDGE STANDARDS

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KP 07/30/2021

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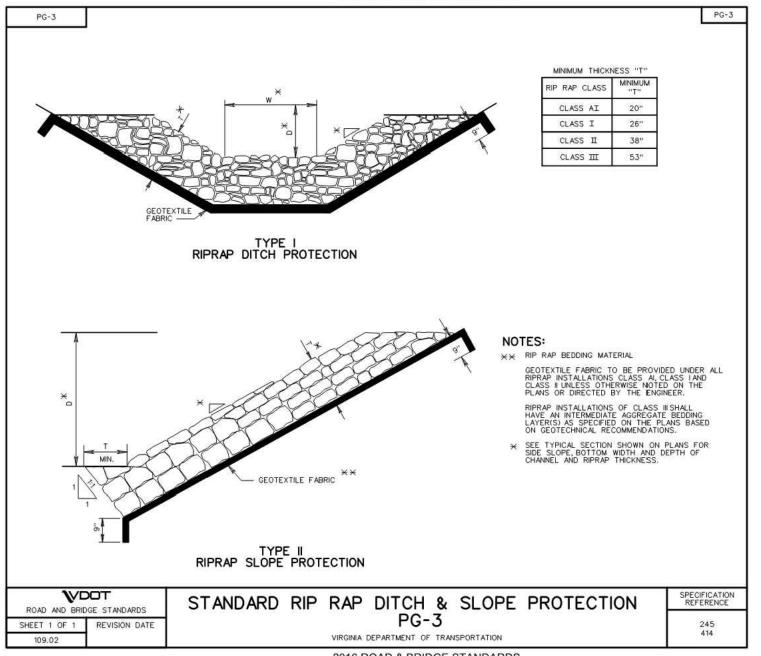
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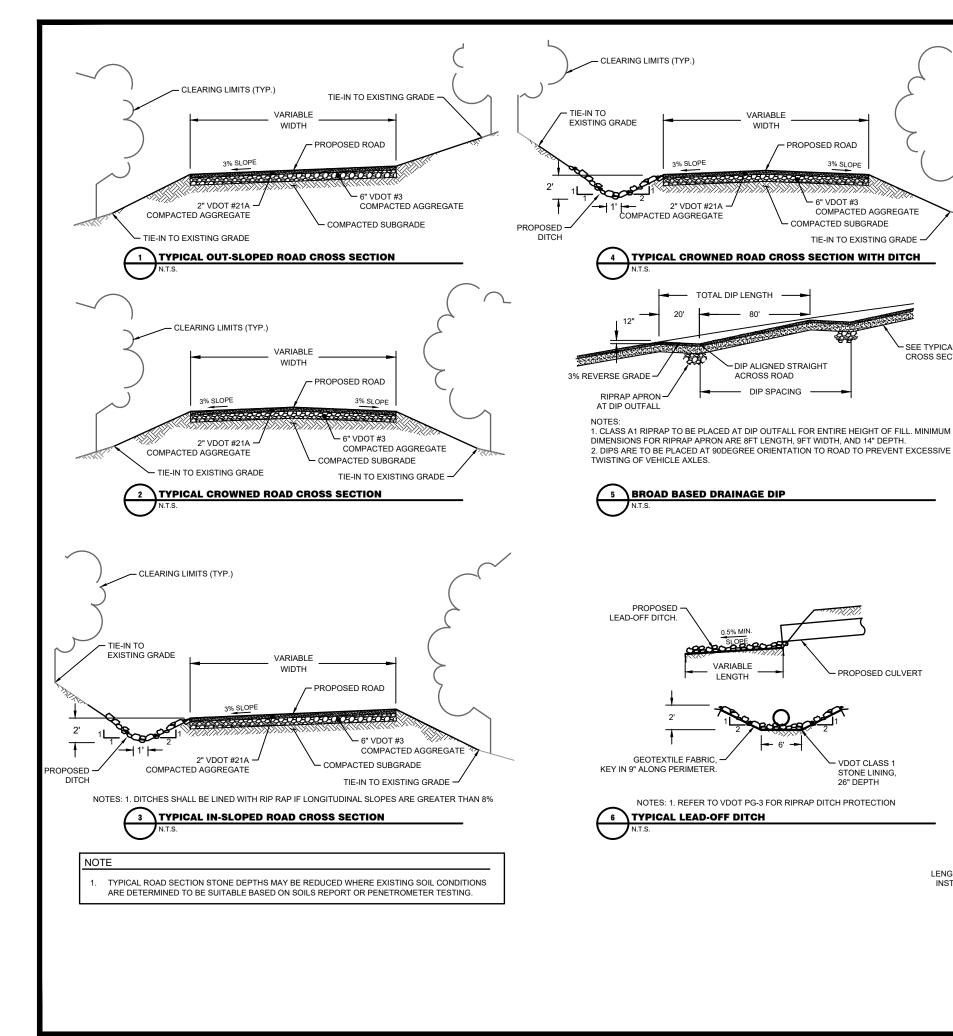
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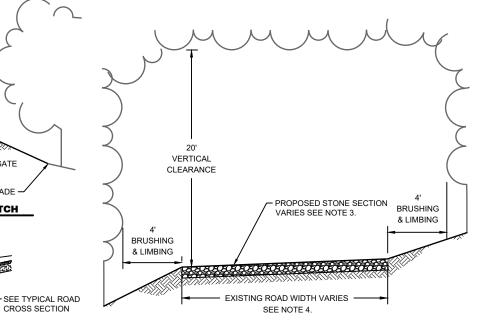
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2016 ROAD & BRIDGE STANDARDS



2016 ROAD & BRIDGE STANDARDS





CROSS SECTION

VARIABI F

WIDTH

TYPICAL CROWNED ROAD CROSS SECTION WITH DITCH

DIP ALIGNED STRAIGHT

DIP SPACING

ACROSS ROAD

TOTAL DIP LENGTH

BROAD BASED DRAINAGE DIP

VARIABLE

LENGTH

NOTES: 1. REFER TO VDOT PG-3 FOR RIPRAP DITCH PROTECTION

PROPOSED : LEAD-OFF DITCH.

GEOTEXTILE FABRIC,

TYPICAL LEAD-OFF DITCH

3% SLOPE

COMPACTED AGGREGATE

2" VDOT #21A -

PROPOSED ROAD

6" VDOT #3

COMPACTED SUBGRADE

3% SLOPE

COMPACTED AGGREGATE

TIE-IN TO EXISTING GRADE -

PROPOSED CULVERT

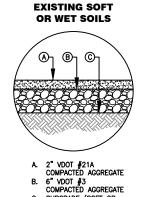
VDOT CLASS 1

STONE LINING.

- REFER TO C7-01 FOR CLEARING & GRUBBING SPECIFICATIONS.

 EXISTING VEGETATION TO BE BRUSHED AND LIMBED UP TO 4' BEYOND EDGE OF ROAD.
- PROPOSED STONE SECTION IS DEPENDENT ON EXISTING ROAD CONDITIONS. SEE DETAIL 8 FOR SPECIFICATION.
- PROPOSED STONE SURFACE TO MATCH EXISTING ROAD TEMPLATE WIDTH. MINIMUM WIDTH OF 10' & MAX WIDTH OF 20' UNLESS OTHERWISE NOTED ON PLANS.





EXISTING GRASS SURFACE

6" ASTM C33 (3-IN RDC) WELL GRADED COARSE AGGREGATE SUBGRADE (BLADE, REMOVE, AND STOCKPILE TOP SOIL PRIOR TO INSTALLATION OF

EXISTING STABLE

GRAVEL SURFACE

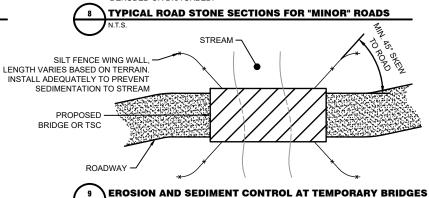
A. 2"± VDOT #21A COMPACTED AGGREGATE B. EXISTING STABLE

GRAVEL SURFACE

C. SUBGRADE (SOFT OR

WET SOILS)

- ROAD SURFACING SHALL BE ADEQUATE TO SAFELY PROVIDE ACCESS FOR ALL ASPECTS OF THE PROJECT.
 FOR EXISTING GRAVEL SURFACES, ADDITIONAL 2"± OF STONE AS
- SHOWN ABOVE IS REQUIRED FOR STABILIZATION WHEN SURFACE IS DENUDED OR DISTURBED.



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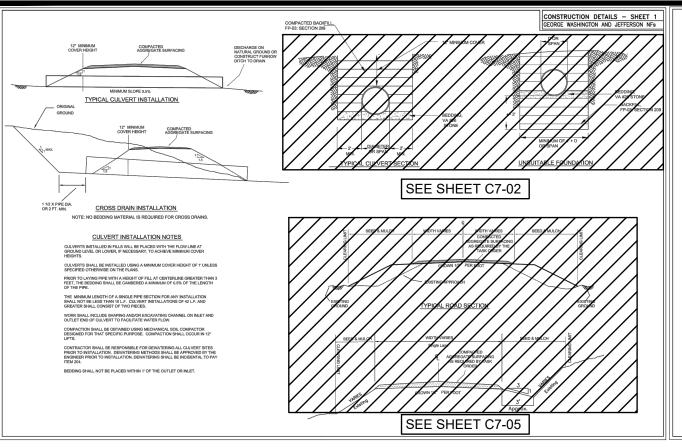
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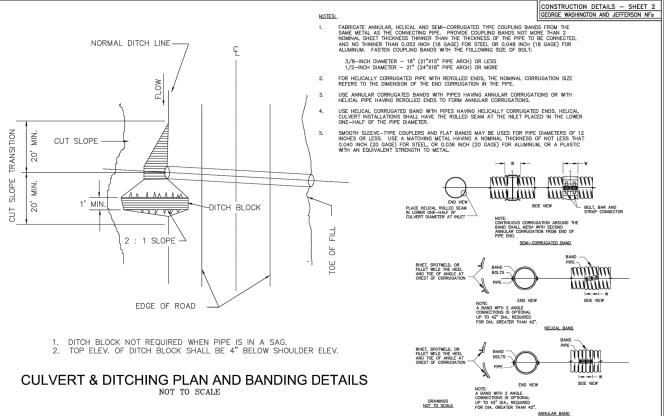
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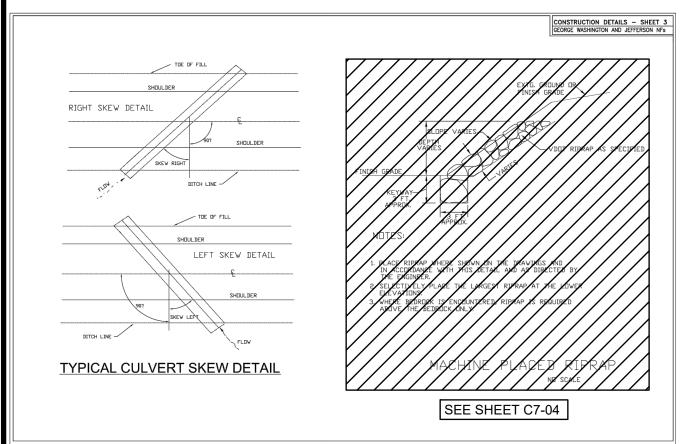
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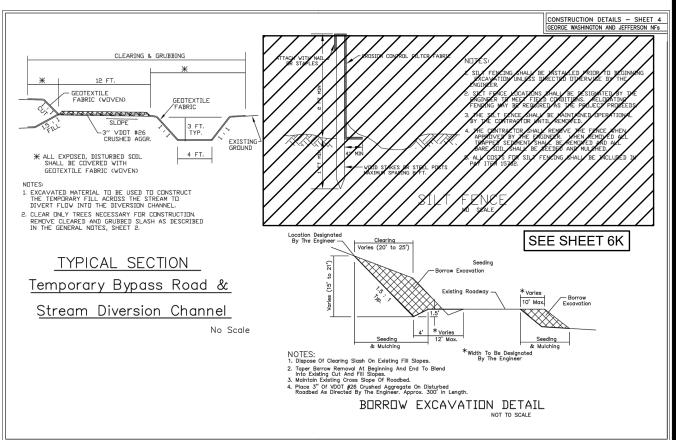
C7-05

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Dewberry Engineers Inc.

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GLEN, VA 23

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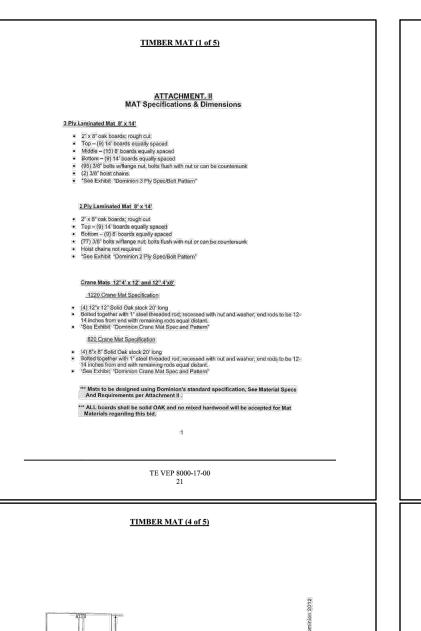
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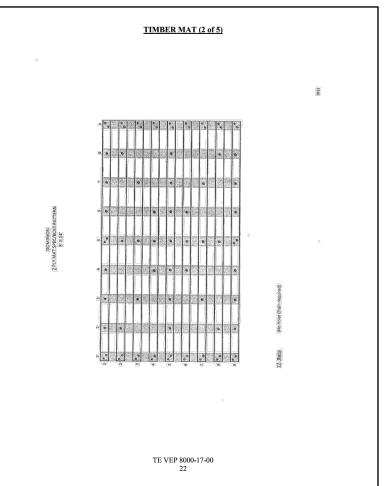
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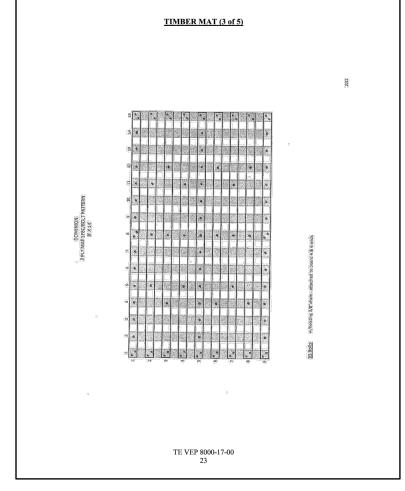
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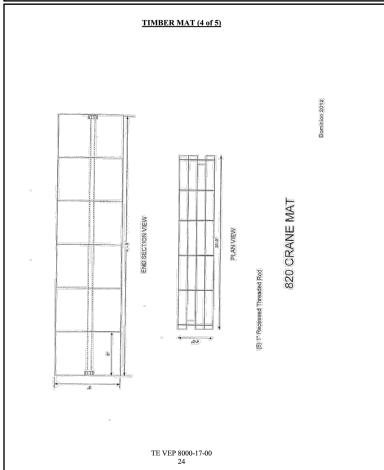
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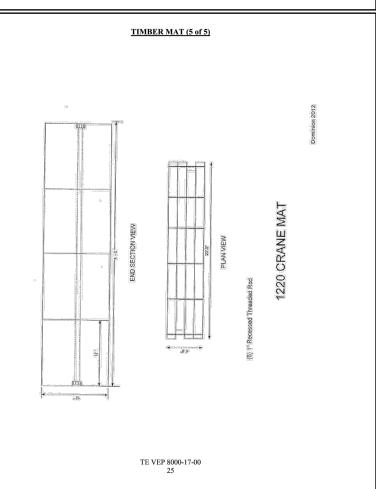
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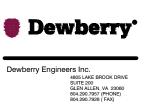












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